

and the result has probably been the result of the various
and many maladies which have been the cause of the disease and
the various remedies which have been applied to remove the disease.

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Part I. - Original Communications.

ARTICLE I.

Fever of Summer and Winter—their causes and Treatment. An address delivered before the Wabash Central Medical Association. By CHARLES G. BALLARD, M. D., President of the Association. Published by order of the Association.

It will suit our purpose on this occasion to divide diseases into those of Summer and of Winter, as we shall endeavor to point out in what they are identical, and in what they differ.

Summer diseases are disorders of secretion, while those of Winter are inflammations of the serous membranes and other parts, superadded to the morbid condition of the secretions, which alone constitutes the Summer diseases.

The heat of Summer predisposes to diseases of secretion by keeping up a stimulation of the capillary vessels, thereby producing a state of debility from constant excitement, by which the equilibrium of circulation is destroyed, and one consequence must necessarily be an altered state of secretion which tends very strongly to the setting up of febrile excitement.

Bilious fever is so common in the great Mississippi Valley, that it attracts our attention more than any, and not unfre-

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quently more than all others put together; and after all that has been said, and columns have been written upon the subject, we are of opinion that it is a disease purely of secretion.

Let us here simply enquire, what do we meet in every examination of cases of bilious or summer fever? What disorders do we find? And where do we find them? I answer, in the secretions of the skin, kidneys, stomach and liver, and I will add in the circulation, which, by the way we regard as consequent upon, or growing out of the abnormal condition of the secreting organs. These (the morbid condition of the secretions) we think to be the constituent elements, and *all* the constituent elements of bilious fever.

We are aware that a great deal is said about the debility, the irritability, and the morbid condition of the nervous centres, etc., but who I would ask supposes that any impression whether normal or abnormal, pleasurable or painful, is made through any other medium than that of the nerves? Who is wise enough, or metaphysical enough to explain how this is, or what it is? If in the great crucible of nature things are found so sublimated or refined as to elude investigation, we should have nothing to do with them. It is only when they are tangible and made appreciable to our minds or senses that an attempt at useful investigation promises the best reward for our labor, therefore all we can reasonably hope to do, for our own improvement and the benefit of mankind, is to investigate disease after it is so far developed as to be made cognizable to the senses.

Causes of Bilious Fever.—Every systematic writer on medicine for the last five hundred years, has attributed it to marsh miasmata.

And what, we would enquire, is this miasma that is capable of producing such potent effects upon the human race? We are gravely told that it is a noxious matter in gaseous form, produced by the decomposition of vegetable matter existing at certain seasons of the year in the atmosphere,

ready to be inhaled at every inspiration and to do the bidding of the angel of destruction.

A medical man who denies the operation of this very satisfactory, and most potent cause of Bilious fever in all its grades from simple chill to black vomit, runs the risk of being excommunicated for heresy, and sent to the mad house as a lunatic. But with all these fearful consequences before our eyes, we shall on the present occasion dare to deny this long cherished faith, acknowledge our skepticism, and state a few reasons for our dissension.

And first, the boldest advocates of miasm have failed to prove its existence. All their testimony and arguments, the greatest latitude being given to them, only tend to show it inferentially.

Secondly, we object because we frequently see a great deal of bilious disease early in the season before a miasmatist would hardly claim that it was produced by vegetable decomposition, unless he should happen to have a portion of last year's stock on hand.

Thirdly, because we see the same disease in winter when vegetable decomposition, to any available extent, is wholly precluded.

Fourthly, we object because there is about the same amount of vegetable matter in one year as in another and it some way or other disappears about the same time, and consequently if like causes produce like effects as philosophers of old taught us, it seems to me that the present season would not have been so healthy.

Fifthly, inasmuch as vegetable decomposition must be infinitely enhanced after vegetation is killed by frost, reasoning *a priori*, we should be led irresistably to the conclusion that bilious disease would be equally multiplied, but, unfortunately for the advocates of this doctrine the very reverse is true. Therefore, after all the examination and reflection we have been able to bestow upon the subject, aided by all the lights which effort has endeavored to throw upon this subject, we

are free to acknowledge that it has all failed to produce conviction in our mind, and consequently we feel constrained to reject the theory as altogether untenable, although it places us numerically in a very large minority. We feel strongly inclined to the opinion, whatever difficulties may be in the way of a full and satisfactory explanation of the manner by which their effects are produced, that considering heat and moisture as the cause is a much more rational and defensible theory of bilious disease, and comports much better with the facts in the case.

It is not hard to conceive that the direct application of these agents might produce predispositions, and alterations in the animal economy inconsistent with a state of health without calling up the intermediate agent of miasm.

We have already said that the heat of summer predisposes to bilious disease by its continued stimulation of the capillary vessels, this no one will deny. The nervous filaments must also suffer from the same cause, and a general weakness must be the inevitable result. The secretory vessels of the dermal structure are brought directly under the influence of solar heat, and are stimulated to excessive action, which must finally end in debility, and it is not uncommon to see cases of cholera morbus, diarrhoea, nausea and vomiting frequently occurring after a few days of great heat in the early part of summer, which generally passes off with but little derangement in the circulation, and rarely terminates in a febrile paroxysm. But this is not always the case for sometimes a most malignant and distressing form of fever is set up and established by one or other of the above diseases. This shows a close connection between them and fever, and seems pretty clearly to manifest their common origin, and these are generally referred to the heat of the season as their cause.

In some parts of Africa under the burning rays of a tropical sun, the moisture of the atmosphere, we are told, is so great that the dew point is only five degrees below the greatest solar heat. There, immersed in that excessive heat and mois-

ture, mankind are placed on the very verge of human existence. No one's life is safe there, even for a few weeks, except those who are born and raised under these blighting influences.

What effect must such a state of atmosphere, heat, and moisture produce on the animal economy and especially on the skin and its secretions, and that without the aid of miasm! But the objector says, our atmosphere is not so bad as that of Africa—neither are our bilious diseases, but will be found to bear about the same relation to those of that climate, that our atmosphere, in point of heat and moisture, bears to that of Africa, or any other tropical climate.

1 We suppose healthy perspiration to be a sanative process of nature, or in other words that it is an excretion necessary to be thrown off in order to maintain that equable action necessary to health, and if this be true, we think it will require much more ingenuity to explain the *vis medicatrix naturæ*, or how it is that nature resists their tendencies to produce disease with so much potency, than it will to account for their being able to produce bilious disease without the aid of the monster miasm.

If heat is capable of producing the excitement and debility of which we have spoken, and a great excess of moisture is added to it, and if a healthy action and a normal secretion of the skin is requisite to health, can it be strange that the enervating effects of so much heat, together with the moisture of the atmosphere obstructing cutaneous secretion—it not being able to take it up by the process of solution when it is already surcharged with water—I say is it strange that derangement of secretion should be produced? We suppose that if the secretion of which we are speaking is at all necessary to health, it is equally important when it is thrown upon the surface, that some agent should be provided by which it should be carried off, or otherwise it would counteract its own ultimate end, and the consequence would be, that this excrementitious portion of the blood would be retain-

ed in the circulation, and morbid action to a greater or less extent, necessarily, ensue. Nature, always perfect in all her works, has kindly provided the means to accomplish this desirable object. The atmosphere is capable of holding a vast amount of water in solution. When dry it absorbs it with great rapidity, always, however, in a direct ratio with its dryness, therefore it follows that as the air approximates a state of saturation, its powers of rapid solution are proportionally diminished, if so we see no difficulty in tracing diseases of the hot season directly to its legitimate cause, without calling in the aid of miasm, or summoning any other spirit from its rest in the "vasty deep" to aid our infirmities.

From what has already been said you will perceive that we incline to the opinion that the causes of bilious disease are two simple natural agents, acting directly on the skin and thereby stimulating, modifying, debilitating and obstructing it in its sanative efforts to preserve the system in a state of health. Here we think is to be found the first link in the chain of morbid action out of which all others follow as cause and effect. We all know that if irritability is not in a direct ratio with debility, that it is very much enhanced by it, and consequently we may not wonder that after the cutaneous vessels have been submitted to continual solar stimulation for a time incompatible with health, that debility will follow, and if a damp state of the atmosphere prevents in any way, either negatively or positively, the elimination and carrying off this deleterious portion of the blood, whatever its qualities may be, I care not, the effects may be different but the result will be certain, disease must and will follow the retention and circulation of a principle which should be thrown off for the purpose of purifying the blood. Suppose that it is a sedative, in that event the blood will not sufficiently stimulate the heart, and consequently its action will be enfeebled, the blood will not circulate with sufficient force and fullness through the stomach, liver, and kidneys to excite them to healthy secretion,

and here will be new links added to the chain of morbid action, to say nothing of the necessity of a full and free circulation through the pulmonary ramifications, in order to a full and perfect decarbonization of the blood while passing through the lesser circulation.

The immediate cause of summer and winter disease it seems to me is about the same, only applied under different, if not opposite states of the system. In summer the cause of obstruction is applied to the system when debilitated by solar heat, but in winter the obstructing cause is applied to a system braced up by cold and in vigorous action, and inflammation is superadded to disease of simple secretion and is developed on the serous membranes and other parts prone to inflammatory action—thus we have the same bilious disease in winter, complicated with inflammation, which renders the treatment far more perplexing to the practitioner, and the terminus more doubtful and dangerous to the patient.

As we have neither time, nor inclination in this address to argue this matter much farther, we wish, lest we should be misunderstood, to state explicitly our position. In short it is this, that heat is the great predisposing cause of all our summer fevers, and cutaneous obstruction the existing cause of both summer and winter fevers.

It matters not whether the existing or immediate causes are brought about by solar heat so long applied to the surface and inhaled into the lungs as to produce the obstruction by the direct debility of the secreting and exhalent vessels of the skin; or whether it be produced by humidity of the atmosphere, because the result would be precisely the same—viz., the excrementitious portion of the blood which nature designed to throw off by perspiration, would be retained in the circulation.

It now remains to say but a few words on the causes of death by fever, and close this part of our address with a few very brief general directions on the plan of treatment best calculated to avert a fatal termination. There are but three

ways at most by which fever terminates fatally. They are congestion, inflammation, and exhaustion. If engorgements are suffered slowly to take place in the liver, or kidneys, healthy secretions may be suspended a length of time incompatible with life; death also very frequently happens from cerebral venous accumulations. Inflammation may also set up in these or other organs and produce disorganizations, necessarily fatal, or the system may become so exhausted by the violence of the disease as to preclude the possibility of recovery. The latter, however, we are inclined to think too often depends on one, or both the other causes, and we are decidedly of the opinion that if the practitioner treats his case with judgement and discretion, he will have but little cause to fear a fatal termination from debility alone.

The query now arises, is it possible so to treat fever as to avoid inflammation on the one hand and congestion on the other, and to prevent them from running on to such an extent as seriously to endanger the life of the patient? We think after a long experience in this matter, that it is altogether practible in a great majority of cases. And, without attempting to say what the specific treatment should be in an individual case, we say in general terms that it is the business of the physician at each and every visit to ascertain what lesions of secretion, circulation, or inflammation exist and meet them promptly with appropriate remedies; and, with a warning voice, we would say do no more; for by goading an organ unnecessarily you not only add to the stock of general debility, but you may establish inflammation or excite congestion ultimately fatal to the patient.

It is the practice of not a few who call themselves physicians when called to a case of fever, to make a prescription something like this—a dose of calomel and ipecacuanha, febrifuge powders, spts. nit., epispastics applied to some part of the subject, and, as it is fashionable to give quinine, this part of the medication will not be omitted. Now this may all be very right and proper, provided there are lesions of se-

cretion of the liver, kidneys, and skin, and also of the nerves and circulation which, it is true, are all sometimes present in a protracted fever case. Yet, even in an extreme case of this kind, it admits a doubt in my mind, whether in a practical point of view this is good practice, when the energies of the system are broken down by disease. Nature generally responds promptly if you call on her at but one or two points at a time, but if you are exorbitant in your demands she will do nothing.

Then I would say when you find a torpid liver, act upon it promptly with its most appropriate stimulant. If morbid action in the kidneys, use some one or more of that class of medicines best calculated to call them into action. And here let me observe that the importance of full and free action of these organs, is not I fear as fully appreciated by many physicians as its merits demand.

It is just as necessary to the safety and speedy recovery of the patient, that the secretions of these glands should be kept in or restored to normal action, as that of the liver, and what is true of these secretions is also true of that of the skin, and although it may be impossible for several days to effect or produce sensible perspiration, still this object should not be lost sight of, and to this end the paroxysms should be lessened and shortened by frequent spongings of the body with cool salt and water, and the administration of cooling acidulated drinks and perspiratives.

Now it seems to me, and experience proves the fact, that if we promptly call on a secreting organ by its appropriate stimulant, and give it sufficient rest after exciting it into action, for there is such a thing as over stimulating an organ and breaking it down and bringing on engorgement or inflammation (the very thing proposed to avoid,) and we will prevent both engorgement and inflammation of that organ, and so of each in turn.

I have tried to make myself understood on this subject, yet I may have failed.

I have labored to maintain that fever is a disease of the secretion, that the remote cause of summer fever is heat, and the exciting cause is obstructed perspiration, that our winter fevers depend on the same exciting cause, and that the difference between them arises from the fact that in the one fever is induced in a patient debilitated by the heat of summer, and in the other it is set in action in one braced by the invigorating effects of cold, and consequently assumes an inflammatory type. That the successful management of the summer form consists in preventing congestion or inflammation from being established in any organ essential to life, and that this equilibrium of action can only be maintained or restored by a vigilant attention to the secretions, and when there is a departure from the normal standard in any of them, to apply the remedy best calculated to bring it back to a good state of health.

The winter form of fever will in many instances require the use of the lancet, epispastics, and expectorants.

The congestive form of fever which we hear so much about in some sections of this country, while some authors deny the existence of any such disease, requires vigorous and prompt treatment, and although it rarely if ever appears in this parallel of latitude, yet too many of the profession who never saw a case of congestive fever in all their practice, see as they suppose, its drapery in almost every case of fever, whether inflammatory or otherwise, that falls within their scope of operation, and if they are so unfortunate as to lose a patient from whatever cause, they immediately invoke curses on congestive fever, and charge it with the murder of their patients.

In this form of fever, which we have seen something of in a state south of this, the congestion is rapid, coming on in a few minutes, not like the slow engorgements of which we have been speaking. It is ushered in with great distress in the praecordial region, difficult respiration, frequent and deep sighing, shrunken features, pain in the back and head, nausea and sometimes vomiting, cold clammy perspiration, great

thirst and restlessness, a constant desire for fresh air, and a sensation of internal heat referable to the stomach or lungs, and sometimes both. If frictions, stimulants and heat to the surface, stimulants and alteratives in copious doses are promptly administered by the mouth, reaction will slowly take place; partial at first, but generally pretty full in the end, which gradually abating, ends in a moderate, warm, healthy perspiration and the patient becomes quite comfortable, and had you not known what his condition had been, you might be led to anticipate but very little trouble with him, but unless active and vigorous measures are promptly adopted and carried out, six or twelve hours will reveal to all concerned, the imminent danger to which he is exposed. You may again succeed in getting him through this paroxysm, but if you do not afford him relief and secure him against a third, you will have nothing to hope.

A few more words and I am done. What is congestion? Or more properly, how is it brought about in such a rapid manner as it frequently takes place? Some have referred it to a weakened action of the heart. Now it would seem that if a weak action of the heart was productive of such alarming and fatal results at one time it must be so at all times, therefore in every and all cases of weakened action of the heart we should have rapid and fatal congestions, which every day's experience contradicts.

Again it would appear to us that in a weak action of that organ depending on organic debility the result must be but one series of fatal congestions. How would this state of things be remedied? Why, the advocate of this theory would tell you, stimulate the heart to stronger action and you will unload the venous system. Suppose you do, can you keep it up *ad libitum*? If not when you cease your stimulation, the debility remaining, not to say increased congestions, must again succeed. That congestions do take place is beyond all cavil or dispute, but how, is not so clear.

Whether any man will ever be able to demonstrate this mat-

ter so clearly and definitely as positively to put the question forever at rest is a matter of some doubt.

We have frequently put the query to ourself, when we have met with deep and sudden congestion in the portal circle or brain—How does this local fullness arise? Why does it take place? Surely not from a general, it must be a local cause. For my part I can conceive of but one pathological condition by which quick and deep engorgement can take place, and that is a partial paralysis of the capillary vessels of the organ congested. This, by relaxing the vessels, thereby enlarging their caliber would allow the blood to flow too freely through them, and venous congestion would consequently ensue.

ARTICLE II.

Observations Pertaining to the Pathology and Treatment of Typhoid Fever—By W. MATHEWS, M. D. of Eberle, Ind.

For the last three or four years typhoid fever has been of frequent occurrence in this (Putnam) county.

Respecting its primary cause I need say nothing. I believe that the disease can frequently be traced to a specific contagion, but that in other instances, it originates from other and inscrutable causes. In this respect it has appeared to me to resemble scarlet fever; a disease which, though undeniably contagious, not unfrequently is of spontaneous origin, that is, arises independently of its well known contagious cause.

In conjunction with the consideration of the Pathology of typhoid fever, it is necessary that mention be made of the more prominent of its symptoms, in order to explain certain points therewith connected.

The disease usually makes it attack quite insidiously. The

individual about to be attacked complains only of a slight indisposition for perhaps a week or ten days, prior to the evolution of the more unequivocal symptoms of the affection. And it may be that under certain favorable circumstances, like what sometimes happens in scarlatina, typhoid fever produces no structural lesions, and but slight functional disturbances, and the disease thus feebly evolved may elude observation altogether, although the pabulum of life, the blood, may have, in a low degree, been charged with a poison, which in a higher degree, and more concentrated form, causes the most violent and even fatal commotion of all the vital functions. Therefore in other, and the majority of cases, the constitutional forces are inadequate to resist the working of the cause, the specific poison, when it has once been introduced into the system, the blood perhaps, and results mischievous or even fatal ensue. These results, it is proper to remark, are to be regarded as consequences of the fever, which, as has just been intimated, does occasionally, in my opinion, run its course without complication or being followed by any such untoward effects.

Like all other serious febrile affections, typhoid fever in its course is prone to result in inflammation of one of these structures, the brain, the lungs, or the intestinal tube. Now delirium is by no means an infallible indication of phrenitis, but when it shows itself early in the disease under consideration, and when it is furious, persistent, and accompanies a flushed countenance, heated head and violent carotid pulsation, I believe we may be pretty certain that it exists and that the force of the disease is falling upon the "citadel of life." Patients thus circumstanced, will generally be benefitted by a moderate venesection, by refrigerants to the shaven scalp, and by fearless mercurialization. And such I may add, is the treatment most commonly prescribed. But it has very rarely fallen to my lot to see typhoid fever complicated with cerebral inflammation. In nine cases out of ten, as the disease occurs

here, the brain, though its functional aberations be strong and well marked, remains free from organic change.

An error in diagnosis in such cases often leads, I am persuaded, to the gravest consequences, for if the delirium be sympathetic of intestinal specific mucous inflammation, blood letting fails to control it, and reduces the patient, while the mercury invariably, if often repeated, greatly aggravates its cause.

Pneumonic inflammation is, perhaps, a more frequent accompaniament of typhoid fever, than that of the head. When active, acute inflammation of the pulmonary organs complicate the disease, the tart. antimony, will be found a powerful resolvent agent, but here again, it becomes us to watch the mucous membrane of the alimentary tube. Irreparable mischief must ensue, if we allow a mere sympathetic cough to decoy us from our post. Tart. antimony is a powerful medicine, but in the present disease, I believe, is wholly inadmissible when any evidence of gastro-enteric inflammation exists.

Again, and in at least nine-tenths of all the cases of typhoid fever which have fallen under my immediate observation, the mucous lining of the stomach and bowels, is the seat of the secondary inflammation.

In the treahtment therefore of this *abdominal variety* of the disease, it is of the greatest importance to bear this in mind, and to direct our remediate course accordingly. Passire or quiet delirium, a quick wirey pulse, a dry, red tongue, diarrhoea, tympanitis with tenderness, on abdominal pressure being made, are symptoms which ought always to lead us to suspect the existence of lesions of the mucous tissue, but if the diarrhoea prove persistent and will not yield when the appropriate treatment is applied, then, I believe, we need entertain no doubt as to its presence. In cases of this kind the head is not, generally, abnormally hot, and most usually the patient sweats profusely perhaps the fever is paroxysmal, and the delirium more marked at night.

It is this abnormal form of the disorder that post-mortem inspection exhibits traces of pre-existent inflammation of the and mucous folds follicles, known as Peyer's glands. These post-mortem appearances, indeed, have been so constant as to lead some to the conclusion that the disease is essentially a specific inflammation and ulceration of certain portions of the mucous glands and follicles, but there is not evidence sufficient to establish such an opinion.

The treatment in the abdominal variety of the present affection, to be successful, must be expectant. No other articles of food should be allowed than the simplest farinaceous soups, and those only in small quantities. Quiet should be enjoined, and the patient may be allowed cooling vegetable acidulated drinks.

If the *vis medicatrix naturæ*, be of sufficient strength to carry the patient safely to the termination of that course which the disease is taking, our treatment will consist in leaving it undisturbed. But, on the other hand, if we see the disorder diverging either to the right hand or the left, it is our duty to gently restrain or even coerce it back. But under all circumstances, the natural forces must be trusted with the cure. We are, if possible, to preserve our patient until nature overcomes and expels the disease from the system.

If diarrhoea be present, it probably depends upon ulceration, let us give opium. It is capable of fulfilling various indications in typhoid disease, that is, in the abdominal variety. It not only quiets the nervous symptoms, regulates perspiration, increases the volume, and lessens the frequency of the pulse, but it also, by controlling the undue peristaltic movements of intestines, permits the natural forces to overcome and remove the inflammation and ulceration situated in these organs. It should be administered in small and repeated doses, so as to keep up a constant impression, and, provided it is inadequate to control the diarrhoea, acet. plumb. must be added. Constipation is to be removed by enemata, and, if need be castor

oil. But, let me repeat, *above all*, the strictest antiphlogistic regimen must be enjoined.

When collapse ensues, carb. ammonia, camphor, opium, and quinine, with nutritious, unirritating diet are our sheet anchors. Brandy and wine I think inferior to the stimulants above mentioned. In this case we are to sustain life till the reparative powers restore the organic lesions.

With the view of imparting a healing tendency to the ulcerated bowels, Dr. Ross some years ago proposed giving enormous doses of calomel and jalap, supposing the mercury would in its course along the diseased surface act as a tropical agent, but such a practice must be hazardous in the extreme, and none but the fearless will venture to adopt it.

ARTICLE III.

Nitrate of Silver in Membranous Croup.—By V. M. SATTERLEE, M. D., of Green Bay, Wis.

In September last I was requested to visit Miss M. G., at 9 years with "*Cynanch trachealis*."

Found her with face flushed and swollen; eyes protruded; laborious respiration, giving rise to a frightful hissing noise; pulse 115 a minute.

Gave an emetic immediately, with temporary relief; applied mustard, then dilute nitric acid to the throat, and prescribed such other remedies as the circumstances of the case seemed to demand.

Breathing became louder and might be heard all over the house, symptoms more urgent, and patient fast sinking under the disease.

I then determined, as a last resort, to use strong solution of

nitas argenti, which was prepared, and a piece of soft sponge well saturated with it, was introduced low down in the trachea. In less than half an hour from this time the breathing became much easier, and considerable expectoration of ropy matter was obtained, which gave instant relief, and within one hour from the time of using the caustic, a piece of *false membrane* was thrown off, being an inch long, hollow, and tube like. The effect was immediate. Her breathing, so distressingly performed a short time before, was now nearly natural, and she could speak distinctly, which she could not do for three days previously.

ARTICLE IV.

Letter from Joel E. Hendricks, M. D.

MESSRS EDITORS:—

You have published an article (art. 5.) in the Journal for February and March, in which the writer, Dr. Jackson, expresses his disbelief in the agent called malaria, and assigns, as a cause of what are termed malarial fevers, a superabundance of carbon in the blood. I believe that few physicians, if any, will admit the positions taken in that article, yet I deem it not improper to make a few remarks on the arguments of the writer.

1st. Dr. Jackson supposes that, because there is in existence other agents than malaria sufficiently potent to produce disease, it is unphilosophical to attribute it to malaria, which he regards as an "unknown or doubtful cause."

2d. He supposes the cause of fevers, especially bilious, intermittent and remittent fevers, to be a superabundance of carbon in the blood.

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3d. He supposes the reason why persons are more afflicted with ague in some portions of the country than in others, is because they are more subject to the influence of heat and cold, breathe more carbonic acid gas, and eat less food that will unite with carbon, and form new compounds.

1st. Respecting the existence of malaria, it is true that of its essential nature we know nothing, and respecting its origin we are uncertain; in these respects it may be said to be unknown, but, we infer its existence from its effects, as certainly as we infer the existence of a specific agent which produces typhus fever, measles, &c. The evidence in the several cases is the same.

2d. I do not pretend to deny the potency of the agents mentioned by Dr. Jackson, in producing disease, but I deny that we have any evidence of their being the principal agents in producing *ague* by causing a suppression of the perspiration. On the contrary universal experience teaches us that the general result of suppressed perspiration is catarrhal fever.

3d. To infer that fevers, especially bilious, intermittent, and remittent, are the result of irritation produced by a superabundance of carbon retained in the blood, because in those fevers carbon appears in excess, combined with the excretions, appears to me quite illogical, for it is well known that the functions of the skin especially, are performed vicariously by other organs. Hence, if the functions of the skin are disturbed by any cause, so as to suppress perspiration, we would be led to expect that the perspirable matter would appear in the other excretions; but we could not logically infer that this perspirable matter is in all cases the sole cause of the irritation. On the contrary we have reason to believe that in ague especially, perspirable matter is *not* the principle cause of the irritation, for, if it were, the abundant excretions should afford permanent relief.

It is probable therefore, that in bilious, intermittent, and remittent fevers, instead of a superabundance of carbon in the blood being the sole cause of the irritation, if a superabun-

dance of carbon exist at any time during the fever, it is merely a consequence of the deranged action of the skin and glands generally, induced by the introduction into the system of the specific agent which we call malaria.

4th. As to the reasons assigned by Dr. Jackson why agues do not prevail in some localities while they do in others, it is sufficient to say, that all the advantages enumerated, and all other advantages relative to the amount of carbon in the blood are frequently possessed without exemption from the ague.

Yours very respectfully.

JOEL E. HENDRICKS

Auburn Ind., April 28th, 1849.

ARTICLE V.

The Sectional Teachings of Medicine.—By DAN'L STAHL, D.M.

QUINCY, ILLINOIS, APRIL 11, 1849.

Prof. W. B. Herrick:

Dear Sir:—

Is "sectional teaching" of the practice of medicine useful or necessary? or "to treat diseases understandingly, is it requisite for the student to be educated in the localities where they prevail?" These are questions which are now asked and discussed in the circles of Medical men, and in the medical papers of the United States, and concerning which think we ought to come to some understanding. Having no connection, directly or indirectly, with any medical institution, and having no private ends to accomplish which, in the remotest manner, could possibly bias my judgment, I trust that you will consider the opinions which I shall take the liberty to advance here, as the expressions of an honest con-

viction—a conviction which has been forced upon me in the trying school of an experience to which I look back with any other than pleasurable feelings.

The physical or material man is everywhere the same; his organization, with but very slight qualifications, is the same on the sandy plains of Arabia, and on the summit of the Rocky Mountains; on the banks of the Rhine and on those of the Colorado;—everywhere man presents the same number of organs, in (*mutatis mutandis*) the same shape, and organic chemistry finds the same elements in their composition. The functions of this complex organism are also everywhere the same in the whole species of that wonderfully constructed animal *homo*. When, therefore, we wish to examine and to study the construction, the composition, and the functions of this living machine—when we wish to study *anthropology*—it matters little *where* we are taught, if only taught *well*—whether at Paris or Vienna, at Riga or Philadelphia. But it is quite different with the study of pathology and therapeutics. Pathological change and remedial agents differ, and must necessarily differ, according to climate, and even, sometimes, according to locality. Does it follow as a matter of course, that, because man's physical organization is everywhere the same, he is, therefore, subject to the same diseases, no matter whether he inspires the mephitic air of the jungles of Bengal, or the balmy atmosphere of the valleys of the Rhine? By no means. The experience of those physicians who have visited different climates will testify to the contrary; works written by medical men in different countries will testify to the contrary. Although the principle of self-preservation is in man, and, consequently, that of reaction against inimical influences, yet the *constant* actions of these external impressions will and do produce an effect either on the whole system or on single organs primarily, and, by sympathy or otherwise, on the whole system. Thus we find that the inhabitants of warm climates are more subject to hepatic affections; in some parts of the world there is goitre, in

another plica polonica endemica ; in some countries, we find yellow fever and never see a case of the plague ; in others we find the plague in its most horrible form and never have an opportunity of seeing yellow fever. Without extending these illustrations any further, I think I have proved sufficiently that our climate and even our locality can predispose to and produce ills from which the inhabitants of another climate or locality are perfectly exempt, and that hence "sectional teaching," in the liberal sense of the word, is indispensable, unless the practitioner prefers the slow process of experimenting on his patients till he has supplied the advantages of "sectional teaching," by his own observations at the bedside and at the dissecting table. To render the illustration, or, if you will, the argument, still more striking, let us suppose a young man of liberal education and all the other qualifications necessary to make him a good physician, from Mississippi or Louisiana, to have studied medicine at Paris or Berlin, and returning to his native state with the most honorable credentials of his proficiency, learning, and skill in his profession, think you that he will be able to treat yellow fever, congestive fever, and all the sequælae of these endemic fevers with the same ready tact, skill, and familiarity as he who, during his pupillage, watched at the bedside of patients with such maladies, and who has been taught by men who have observed and treated thousands of such cases ? You certainly cannot think so, because you must know that the former had not only no opportunity to see such cases at Paris or Berlin, but they were not even described to him by men who are supposed to have seen them, but by those who have probably *read* outlines of these pernicious fevers, and from these outlines formed a picture of them in their minds—in short this unfortunate Mississippian or Louisianian with his great medical acquirements cannot diagnosticate and treat these endemic diseases of his native state with as much skill and efficiency as he who availed himself of "sectional teaching," because he was taught by men who cannot communicate

practical instruction either at the bedside or from actual knowledge. Book-learning alone will not do either with the teacher or practitioner; both must have "seen and handled."

You perceive then, that although "all men are created equal," "sectional" influences produce "sectional" diseases, the nature, course, and treatment of which can, from the peculiarity of these influences and their effects on the organism, be taught practically and to useful ends only by those who can speak from *experience*. An ounce of experience, with a little learning, both of the teacher and pupil, is worth more to the patient than never so many pounds of learning without experience. Ask any one of the professors of the theory and practice of medicine in the western medical colleges what, aside from his general medical education, renders him competent to instruct his pupils in the symptomatology, course and treatment of the diseases peculiar to the western country as modified by the influence of its climate, and if he does not answer "*practical knowledge*," he is incompetent to the task he has assumed, and he violates the trust reposed in him. The fact is, the teacher must have the true picture of the disease he treats of vividly in his mind, and so he must have the picture of all the phases this disease may assume, and such a picture can be impressed on his mind by observations, by the perception of his senses, and by no other means; and all the sophistical talk about the general principles of medicine, etc., etc., in order to get around the necessity of this "sectional teaching," I consider as coming from men who do not know better or who will not know better. What renders the works of Eberle, Bell, and other American authors, and the monographs (as far as the practical part is concerned) of Dr. S. Cartwright so useful and valuable to us but the truly practical instructions they contain concerning the diseases of this country? and could these have written as they have if they had not seen and treated these diseases? Certainly not. Dr. Bell, in his "lectures," frequently appeals to *his experience* in deciding points of controversy in relation to the treatment

of our diseases, and in the preface to his "Bell and Stokes' Lectures" he says—and this I cite as a potent argument for "sectional teaching,"—"and by steadily bearing in mind the wants and expectations of the American practitioner for information respecting the fevers of the United States and analagous climates, rather than those of European hospitals, camps, and jails, less disappointment, it is hoped, will be felt at my abbreviations on this head, (the literature and history of fevers). I have curtailed to some extent my former lectures on congestive fever, but have still retained those distinctive features which imparted to them that interest in the minds of the physicians of the South and West, which I was sanguine enough to anticipate when I first took up the subject," etc., "for a complete elucidation of the nature and treatment of which (Southern and Western fevers) they (the physicians of the South and West,) must, not look to the hospital statistics nor to the collegiate teachings of Europe," etc. And in an article in the October number, 1846, of "The Bulletin of Medical Science," (vol. iv, No. 10,) this same distinguished writer, (Dr. John Bell,) says, pp. 344 and 345, in reply to Dr. Cartwright's remark, that Dr. Bell has written about as well on congestive fever as any other northern writer who has gone to the north of Europe, where these types of fever never prevailed, to get information, instead of coming South or turning to Hippocrates—"It is not easy to reply to an assertion which could not have been made by any person in his right senses, who had ever read the lectures on congestive fever. He would then have learned readily enough that Dr. Bell did *not* go to the north of Europe to get information on this subject, but that he *did* go to the south, not only in the sense intended by Dr. Cartwright, viz., by consulting those who had southern experience, but, still more, that he went, himself, south, and that by many degrees nearer the equator than either Dr. Cartwright or any of his state rights medicine party. Dr. Bell studied medicine and observed disease in Virginia," etc.

Many of the diseases of the Western States, particularly

of the valley of the Mississippi, require a different treatment from similar diseases of Europe and even of the Atlantic States; others, again, we have here, which are absolutely unknown either in Europe or in New England. If the doctrine of the catholicity of medicine be correct it ought to be indifferent whether a physician is educated at Berlin, Paris, or Chicago, provided he obtains good and sufficient instruction, and this instruction received in any one of these places, ought, consequently, to enable him to practice his profession any where on the habitable globe. But is this attainable? I think not; and to prove this, let us suppose a physician fresh from the best university and hospital of Europe to visit a patient laboring under that dreadful scourge of American infants, *cholera infantum*, and what will be his diagnosis? Anything but the real disease. Or let him be called to a case of *milk-sickness*, (N. B. Do our eastern brethren know anything about this?) and is it at all probable that he can diagnosticate and treat the case correctly? It is almost impossible, because even systematic works on the theory and practice of medicine rarely contain any notice of this disease—a disease which the practitioner in Kentucky, Indiana, and other western states has so often to encounter. Admitting that these two complaints are American and that the European cannot know them except by reading, and we can therefore not pre-suppose him to possess any knowledge of them, let us invite him to the bed-side of a patient, who labours under a malady that is found both in Europe and America. I mean the disease which is here vulgarly called *winter fever*. I doubt not but what our stranger will properly diagnosticate the case; but finding the patient the resident of a log cabin standing upon the banks of one of our western rivers, (and there or in similar locations is where we mostly find these cases of pneumonia notha,) does any western physician suppose that he can treat it with safety? I, for my part, doubt it; at least I would not trust myself in his hands until he had gained the knowledge of its course, etc., by experience.

I could extend these illustrations, but I trust that these few will be sufficient to prove the necessity of acquiring a knowledge of those diseases, which it will be the future lot of the practitioner to treat, not only from men who from *experience* *know them*, but also from observation at the bed-side.

Let one of those who maintain that "the great principles of pathology and therapeutics can never be sectional," (and this position I will say, *en passant*, I don't altogether dispute, I only dispute the "universal application" of subordinate principles :) be taken sick of yellow or congestive fever, let him be surrounded by Schoenbien, Louis, Williams, Mitchel and Cartwright, and let him choose one of these to attend him professionally. Is it likely that he would take the Berlin or Paris, or even the Philadelphia Professor, world renowned as each of them may be, when he has at his command the services of a Cartwright who has spent the best years of his life in observing, studying and treating these diseases? I trow he would trust to "sectional medicine," and sectional treatment too. Or if this same man—this opponent of "sectional teaching"—wishes his son to study medicine with a view of locating at Natchez, New Orleans, or St. Louis, or even at Quincy, would he not advise him to obtain instruction in relation to the diseases incident to these localities from physicians who know them from *experience*, in preference to those who know them but by *reading*, or judge of them by "analogy." Most assuredly he would.

To avoid misunderstanding, I must beg you to consider my advocacy of "sectional teaching" in that sense in which alone it can be reasonably defended, or is necessary or salutary. To say that the European schools, or the schools on the other side of the Alleghanies, cannot impart to our western physicians a good general scientific and practical medical education would be an absurdity; but, notwithstanding this concession, I think I have shown sufficiently in the preceding remarks that these European and Eastern Schools cannot teach their pupils the symptomatology, aetiology, course

and treatment of our western diseases. As well as western physicians, western schools, and western hospitals; and I wish you to bear it in mind *that to this class of diseases* (to treat which, by the by, is two-thirds of the employment of a western physician) *I confine my advocacy of "sectional teaching."*

Accept, my dear Doctor, the renewed assurances of my respect and best wishes.

DANIEL STAHL, M. D.

ARTICLE VI.

Coroner's Inquest—Cause of Death Doubtful.

MESSRS. EDITORS:

The following notes of an inquest held in this place a few weeks since, may be of interest to some of your numerous readers. If you deem them of sufficient importance, please publish.

WILLIAM W. GOFF.

An inquest was held on the 11th February last, before Jos. Kutz, Esq., upon the body of Jane E. Storms, æt. 10. The deceased had resided seven miles from home, with the family of Mr. Roberts. Quite unexpectedly to the parents, the body was brought home on Friday 9th, 4 o'clock, P. M., cold and stiff. Mr. and Mrs. Roberts were along. Mrs. Roberts said the child died on the road home; Mr. Roberts said she was dead when they started. From these and other remarks, and the appearance of the body in general, an inquest was called forty hours after the body was brought home.

After the customary preliminaries, the physicians Drs. Goff and Morris, proceeded to the external inspection of the body, to determine the signs and amount of external injury.

Body emaciated; face, hands, and arms bore marks of recent injuries, consisting of rather large scratches and contusions, with local inflammation; some patches of blood dried on the scalp. On the left parietal bone the scalp was contused, with thickened and hard outlines, and contained fluid blood; the pericranium was detached from the bone for two or three inches in extent. On the occipital bone, just above the ridge, was another and larger effusion of blood; pericranium adherent; clotted blood on the scalp.

The face, arms, and back bore marks or spots of purplish livid hue, some of them having slight inflammatory blushest from the size of a shilling to four or five times that size; some of these spots coalesced, others were distinct, not mottled, with a few exceptions; their general appearance was much that of a bruise or contusion. The entire anterior aspect of the knees was a deep scarlet color, interspersed with scars of old sores. The toes had all been amputated four months before for scrofulous disease—wounds not healed. The ossa calcum were carious, their integuments sloughed. Upon making incisions in some of the before mentioned purple spots, the cellular tissue was found much congested with venous blood, periosteum sound.

With these appearances, and such testimony as could be obtained, the jury were to decide whether violence sufficient to produce death directly, or to hasten that event in conjunction with other circumstances had been used.

The testimony at the inquest and at the criminal trial soon after, was to the following effect.

Doctor Morris sworn. The amount of disease now in the system of the child must have been great; the head shows peculiar appearances, but they probably result from injury; want of care might have hastened the result, which was undoubtedly the fact in the present case. The results of slight injuries in diseased constitutions are much aggravated, compared with healthy subjects.

Dr. Goff sworn. The constitution of the deceased was

badly diseased; the patches of purple do not necessarily indicate violence; has seen similar appearances in the living subject as the result of scrofulous sores; the inflamed appearances on the face, arm, and hand were produced by some slight injuries. The appearances on the head are not the result of any known form of disease; were produced by local injury, either violent or accidental; might have been produced by blows on the head, or by falling; would not have produced death as a necessary consequence, in a healthy person; would have hastened death in a debilitated subject; did not discover any solution of continuity in the scalp. The spots on the arms and back, etc., are probably the traces of former disease if the child had scrofulous sores on the parts; if not they are results of local injury. The external appearances of disease are not such as would account for sudden death; death might have been produced by less external signs of injury than are present in this case. Either of the injuries of the head if produced by a sudden blow, would have produced concussion of the brain, and that concussion might have resulted in death from a pre-existing deficiency in vital power.

Mr. and Mrs. Robinson sworn. Both testified that the child had been subject to cruel treatment, blows, harshness, deficient clothing and nourishment, and had had scrofulous sores.

Roberts sworn. Jane caught cold last September, from sleeping in the open air; sores soon after came out around the nose and mouth, followed by sores on the back, knees, and other parts.

S. C. Roberts (son) sworn. Jane had been subject to frequent falls; fell on the morning of her death, and struck the back of her head on a stick of wood; had a fall at another time, and struck the side of her head on a door-step.

At the criminal trial, the testimony of the Robinsons was ruled out. Some other corroborative evidence was introduced.

From the evidence presented, it appears that the child died of collapse from the injury received on Friday morning. There was some evidence of concussion and probably the vital powers were too feeble for re-action.

The verdict of the jury was that the child came to her death from disease, injury, neglect, etc.

Roberts was discharged.

Being a junior in the profession, will you permit me to inquire:

1st. Will the proper signs of concussion be more likely to proceed from a given injury upon the head of a debilitated person than a healthy one of the same temperament and constitution?

2d. With a given blow upon a thin cranium, are the signs of concussion and general constitutional derangement more likely to result, and be more fully developed than with the same blow upon a thick cranium?

The principal interest in the above case, attaches to the distinction of violence and the proper local manifestations of disease. In such instances, intelligence and discretion are of much account to the physician, and will be appreciated by the community.

Napolean, Michigan, May 14, 1849.

[With regard to the two questions propounded above, we unhesitatingly give it as our opinion that an affirmative answer is the proper one for both—Ed.]

ARTICLE VII.

Case of Nasal Polypus of fourteen years standing cured by the local application of Peach Leaves. By E. W. H. BECK, M. D., of Delphi, Indiana.

In May, 1848, I was applied to by a man in his 76th year, but unusually stout and healthy for his age, for relief from the pressure and pain of a nasal polypus of fourteen years standing. Several times in its early stages he had permitted efforts to be made at extraction, but so tenacious and extensive were its adhesions, and so excessive the hemorrhage and pain that an entire failure was the result of each attempt. He states that it did not trouble him much till recently; at least the inconvenience was not paramount to these means of cure—and thus it continued till its enormous size and pressure urged him again to seek relief. Upon examination I found a fleshy or gelatinous tumor, occupying the whole posterior nares and extending anteriorly so as to fill nearly the whole extent of the nasal passage so that not a breath of air had passed through them in six years. The swelling was such on both sides as to produce disfiguration. As I was making a somewhat rude examination, he requested me to desist on account of the tendency of late to bleed when used roughly. Recollecting the golden rule in Prof. Mott's lecture upon this subject—never to meddle with a polypus of the hemorrhagic character, or of any kind in an old person when disposed to bleed—it was adopted. The only remedy which seemed to me to be entitled to any confidence, was the diluted hydrocyanic acid, by injection. The peach tree (*amygdalus persica*) was just leafing out, and knowing it contains this principle, I directed him to gather a quantity of the leaves, and after pulverizing them, to stuff them up each nostril, and to hold them in contact with the polypus by means of a wad of paper beneath and to re-apply them several times each day. In two weeks after he called on me to show me that

he could do what he had not done for upwards of six years before—"blow his nose with ease," and inhale almost a sufficient quantity of air to fill his lungs with his mouth closed. He was entirely free from that pain and sense of constriction previously felt. In two weeks from this time he could sleep with his mouth closed, and in a month after, not a trace of the disease could be found. Several times since, he had, after taking cold, a sense of fulness in his nose, which soon disappears, however, on re-applying the sternutatory. He remains well and clear of it to this time.

I will only remark, in conclusion, that, in my opinion, the trial of this remedy should not be confined to this class of tumors, or to the nasal passages alone. The hydatid, carcinomatous, fungoid, and bleeding tumors, wherever situated, might yield to its deobstruent and narcotic powers.

In that varicose condition of the hemorrhoidal vessels giving origin to hemorrhoids, and in all tumors of a similar character, I should expect much from the application of the peach leaf. Now that the attention of the profession has been directed to the subject, it is hoped that further experiments with this remedy will be made and reported.

to distinguish with much precision the disease of cholera from "yellow fever, miasma and malignant and other diseases, which are all three popularly called cholera." The author, however, does not seem to have any very decided opinion as to the nature of cholera, and seems to regard it as a disease of uncertain origin, and of uncertain and variable character.

Part 2.—Reviews and Notices of New Works.

ARTICLE I.

Epidemic Cholera: its History, Causes, Pathology and Treatment. By C. B. COVENTRY, M. D., Professor of Obstetrics and Medical Jurisprudence in the Medical Institution of Geneva College; Professor of Physiology and Medical Jurisprudence in the University of Buffalo. "Internal sanatory arrangements, and not quarantine or sanitary lines, are the safeguards of nature against epidemic diseases."—
Farr.—Registrar General. Buffalo: Geo. H. Derby & Co.: 1849. From Publishers.

The small volume with the above title, giving, as it does, a condensed history of epidemic cholera, together with a synopsis of the various theoretical views with regard to its cause, and opinions as to the best treatment for the different stages, will prove a valuable source of information to such as may wish to consult authorities upon this subject.

The remarks of the author upon the causes, pathology, and treatment of the disease, are preceded by a brief history of its appearance and progress, at different times and in various countries, under various forms and degrees; in some instances manifesting itself in a mild form and attended with even less mortality than many other epidemics; and at other times and in other places, casting before it the shadows of fear and doubt, and scattering in its path devastation and ruin. "Somerset, who traveled the Coromandel coast in 1774 and 1781, speaks of a disease resembling cholera, prevailing as an epidemic, and states that in one visitation of the disease, above 60,000 people, from Cherigan to Pondicherry, per-

ished." "The Report of the French Commissioners says it first appeared in Bombay on the 11th of August, 1820, and carried off previous to the month of February following, eleven hundred and thirty victims. Again it returned in September of 1821; accompanied by excessive heat, and destroyed from the 23d to the 28th, two hundred and thirty-five persons."

"The cholera made its appearance at Sunderland, in England, in October, 1831. On the 28th of November, there had been two hundred and ninety-four cases, of which sixty-eight had proved fatal, and thirty-two remained under treatment at the time of the report. It soon after appeared in London, and on the 18th of April, there had been twenty-four hundred and seventy-seven cases, of which twelve hundred and one were fatal. In Dublin, ninety-four cases and fifty-eight deaths. In Cork, eighty-five cases and thirty-eight deaths."

The history of the disease at all times and in all countries, tends to prove that, as is the case with most other epidemics, hot, damp weather, low, marshy districts, and narrow, damp, and filthy streets, determine in a great measure the time and place of its appearance and the degree of its malignity.

In the chapter upon the causes of the disease the author takes strong grounds against those who believe in its contagiousness. "When we remembered," says he, "the panic which prevailed in 1832—the vexation caused and the money expended in useless quarantines—the hurried and barbarous interment of the dead, scarce waiting till the breath had left the body—the worse than brutal desertion and neglect of friends and relations—all growing out of a belief in the contagious nature of the disease; we rejoiced in the belief that, whatever of suffering a superintending Providence might see fit to inflict, we would not again thus aggravate them by our own acts." * * * "If the decisive and explicit testimony of Annesley, who, for five years, had charge of a hospital where cholera patients were mingled indiscriminately with those from other diseases, and who tells us that not more than

six or seven cases originated in the hospital during that time; the no less emphatic testimony of Dr. Searle, who had the disease in India, and who informed us, that when in charge of the hospital at Warsaw, but two cases originated in the Hospital, and that he himself slept in the bed in which a gentleman had died of the disease the preceding night without his contracting it—if the testimony of Annesley and others in India, that when the disease attacked a corps of the army, it was soonest got rid of by separating them into small detachments—if the fact, which was notorious in Asia, Europe, and America, that when the disease attacked large cities the population, in fleeing into the country and neighboring villages, did not carry the disease with them—we repeat, if these facts, together with the experience of the profession from Calcutta to Moscow, and from Moscow to Quebec, and from Quebec to New Orleans, is not sufficient to settle the question of contagion, we are at a loss to see how it ever can be settled."

Almost uniformly it passes from east to west, following the course of large streams and great thoroughfares, and making its appearance suddenly and unexpectedly in one place immediately after abating in another.

In some instances it has been known to disappear from a locality suddenly, and return again after a time with as much violence as before. A single town or village has often suffered from its ravages, whilst the country and towns even in the vicinity have been entirely exempt. It is, therefore, impossible to draw any very definite conclusions as to its cause from the history of its rise and progress.

The causes may be divided, as the author remarks, into, "1st, those that affect the whole community of a place, and, 2d, those that affect the individuals. First, sporadic causes, affecting the whole community of a city or village, are what is usually termed malaric, or, in other words, bad air. This arises, in a great measure, from the decomposition of animal and vegetable matter. It is often found in its greatest inten-

sity, in low, damp, and marshy situations, in the neighborhood of stagnant pools of water—it is always generated in crowded cities, and where large numbers of persons are crowded together, as in armies. It is increased in cities, by close, narrow streets, preventing proper ventilation—by accumulation of filth in the streets, in dwellings, or about the premises; in short, wherever there are accumulations of vegetable and animal matter there is a focus for the generation of malaria."

In addition to the local causes, there are others affecting individuals, such as exhaustion from over exertion, debility consequent upon previous disease, want of sufficient nourishment or clothing, and excesses in eating or drinking.

To these may be added another, perhaps the most potent, cause. We refer to the depressing influence of fear. On this subject the author makes the following, in our opinion, very appropriate and just remarks.

It is well known that there is no moral influence which produces so depressing an effect on the system as fear. It has been clearly proved that the most vigorous of men, even in the most perfect health, may be frightened to death. We have known nervous and irritable persons, who were always thrown into a diarrhoea when much alarmed. If we only look at a frightened person, we see that they present almost the first symptoms of cholera—the face is pale, the surface cold, the pulse feeble, the blood having retreated from the surface to the central organs of the body. Could we satisfy community of what we fully believe, that the epidemic cause is seldom or never sufficient to produce the disease, and that they have nothing to fear so long as they avoid the other and local causes, we should confer the greatest possible benefit on the public.

The symptoms of cholera have been so often and graphically described, that it seems unnecessary to occupy time and space in a recapitulation of signs and indications so peculiar and well marked as those indicative of this disease.

It may be briefly stated that there are properly three stages: the incipient, or first, attended with lassitude, slight pain in

the abdomen, nausea and moderate diarrhoea, or either of the above symptoms may be considered premonitory whenever they occur during the prevalence of the epidemic. At least it is safe at such times to look upon them in that light so that remedies may be used promptly. In the second stage, all the characteristic symptoms of cholera are most generally present, such as oppressed breathing, chilliness, coldness of extremities, weak and instable pulse, cramps, general or partial, vomiting and purging of a thin fluid substance in large quantites.

Cases may, and frequently do, occur in which but two or three of these characteristic symptoms are present.

The third stage which uniformly follows the second, if speedy relief is not obtained from the above named symptoms, is indicated by a sunken, almost death-like appearance of the countenance, ice-like coldness of the surface, intermittent pulse in the large vessels, it being frequently entirely absent at the wrists, and a condition of the hands which is peculiar and cannot be mistaken, appearing, as they do, as if they had been soaked for a long time in water.

Our author contends that the first is the only stage of the disease that can properly be said to be curable, hence the importance of using efficient remedies at the very onset.

The great mistake, as he contends, is to consider the first symptoms as premonitory merely, when they are indicative of this first stage requiring prompt and efficient treatment.

The views of the author upon the treatment of the different stages of the disease are embraced in the following quotations from the chapter upon the subject.

In the first stage of the disease, the patient should confine himself to his bed and take some mild aromatic drink, such as infusion of spear-mint, or camomile, or warm camphor julep until reaction takes place. The perspiration which follows should be encouraged by diluent drinks; this may also be promoted by a powder composed of three or four grains of Dover's powder and one of calomel; or a pill composed of

camphor, gr. ss, opium, gr. one-fourth, calomel, gr. i, repeated every two hours; after the sweating has continued three or four hours, the surface should be dried with warm flannel cloths, and a fresh and clean dress of flannel put on. When five or six of the pills have been taken, they should be suspended, and a small dose of rhubarb and magnesia, or of pure castor oil should be given. Active, or drastic, or saline cathartics should not be given, and if castor oil is used, great care should be taken to see that it is pure and fresh. Most disastrous consequences have resulted from giving castor oil that was rancid. Mild nourishment should be given from time to time. If found necessary, the pills and cathartics may be repeated. The object should be to remove nervous prostration, and congestion which has already commenced, by equalizing the circulation.

Treatment of the second Stage. If the patient was strong and plethoric, the pulse still full and distinct, the cramp severe, or there was great oppression in breathing, we would put the feet and legs in water as warm as could be borne, with the addition of mustard and common salt to the water; open a vein in the arm, and bleed from five to sixteen or twenty ounces, watching the effect produced on the pulse and system generally; then place the patient in a warm bed, apply warmth to the feet and along the limbs; apply a large mustard cataplasm over the stomach, and give one of the pills of calomel, opium, and camphor, every half hour. If the desire for cold drinks is not strong, the patient may drink from time to time a weak infusion of spearmint, with the addition of eight or ten drops of camphorated spirits; if however, the thirst is very intense, cold water may be used instead of the tea, and, in addition small bits of ice given from time to time. The bed should be placed in the centre of the room, without curtains, and the room should, if possible, be large, well ventilated, and if an upper room the better. If the weather will admit, the doors and windows should be kept open—the best stimulus for the patient is plenty of pure air—if the weather is damp, or chilly, so as to render it necessary to close the windows and doors, a little fire should be placed in an open fireplace, to temper the air; no persons should be admitted into the room except such as are necessary; every additional person renders the air more impure. The warm applications should be changed from time to time. If the patient be much exhausted or vomiting, on no consideration should he be permitted to use the night vessel—the effort of

getting up revives the vomiting, and this in turn brings on the alvine discharges. If the patient be feeble and delicate, or if the discharges have been profuse, or if the fluids of the system have been drained off by long continuance of diarrhoea in the first stage, the bleeding must be omitted, and the other means adopted as before. If there is great precordial oppression, cups may be applied over the region of the stomach, and the mustard over the abdomen and over the stomach after the removal of the cups. If the pulse becomes gradually more full and distinct, and warmth returns to the surface, we have only to persevere in these means; after a time giving the pills less frequently, and permitting the patient to take some light nourishment as chicken tea or light broth. If the perspiration becomes profuse—as will be likely—with a warm skin, it should be encouraged by taking some tepid aromatic drinks; the spearmint tea with a few drops of camphor is as good as anything. If, notwithstanding these means, the patient continues to sink, or the profuseness of the discharges continues, we must resort to other means to try and arouse the system to reaction. Much care is, however, necessary to avoid throwing the patient into the fourth stage. Sulphuric ether in small doses should be given, and repeated every ten or fifteen minutes; or a weak solution of carb. of ammonia may be substituted. At the same time an enema of a pint of chicken tea, with a table-spoonful of table-salt, should from time to time be thrown into the bowels, and its retention secured for a few minutes by pressure on the fundament; a sheet should be placed under the patient to receive the discharges, and on no account should he be permitted to rise from the bed. If the symptoms of reaction come on, the use of the stimulants should be gradually suspended. We believe that the more permanent and powerful stimulants such as brandy, ardent spirits, etc., are only admissible where the patient has been addicted to their use. Too much precaution cannot be used during the period of convalescence as regards diet, exposure, etc., in all cases in which the disease had approached the stage of collapse.

ARTICLE II.

Obstetrics: the Science and Art. By CHARLES D. MEIGS, M. D., Professor of Midwifery and the diseases of Women and Children in the Jefferson Medical College at Philadelphia; one of the Physicians to the Lying-in Department of the Pennsylvania Hospital; Vice-President of the Philadelphia College of Physicians; Member of the American Philosophical Society; of the American Medical Association, etc., etc. With one hundred and twenty-one illustrations. Philadelphia: Lea & Blanchard. 1849. pp. 685, 8vo. (From the Publishers--For sale by Griggs, Bross, & Co., Chicago.)

The announcement of the name of Dr. Meigs as the author of a work upon obstetrics, is a sufficient guarantee that it is something more than a mere compilation, as is the case with too many of our American Medical books recently published.

The long experience of Dr. Meigs, as a teacher and practitioner in this department of medicine makes him fully capable of writing a useful and practical treatise of this kind. We were confidently expecting, therefore, to find in it many practical suggestions and useful hints for the obstetrician

After glancing over the work, we are happy in being able to say that we are not disappointed, and can, therefore, recommend it as being one of the very best treatises upon this subject and worthy of being placed in the library of every American physician. It deserves, and will most probably receive, in some future number of this journal, a more extended notice.

H.

ARTICLE III.

Anæsthesia, or the employment of Chloroform and Ether in Surgery, Midwifery, etc. By J. Y. SIMPSON, M.D., F.R.S.E., Professor of Midwifery in the University of Edinburgh, Physician-Accoucheur to the Queen in Scotland, etc., etc. Philadelphia: Lindsay & Blakiston. 1849. pp. 248 8vo. (From the Publishers—For sale by Griggs, Bross, & Co., Chicago.)

This is a work comprising a number of essays written at different times by Professor Simpson, upon the discovery, history, mode of operation, chemical properties, mode of administration, results from the use, etc., of the different anæsthetic agents.

The author believes fully in their utility, especially in midwifery and surgery, and contends that statistics prove that the rate of mortality is diminished under their use.

Those wishing to obtain a full knowledge of the subject and of the arguments in favor of anæsthesia, would do well to avail themselves of the information contained in these several papers from the pen of the distinguished Edinburgh Professor.

H.

Part 3.—Selections.

ARTICLE I.

The Heart-Clot.

To the Editors of the Examiner:

GENTLEMEN: I beg leave, through the columns of your useful periodical, to present the statement of certain opinions I have long entertained, relative to points in pathogony connected with the occurrence of endo-cardial coagula; and I do so, because I consider them deserving of serious consideration by the practitioner.

These opinions are connected with certain points of practice or treatment that are, in many cases, indispensably necessary for the safety of the sick; and my sole desire in offering the communication, is founded on the hope that it may tend to prevent some disastrous events, which the want of a little reflection might allow.

I believe it is a fact, not to be controverted, that in an animal bled to death, the first portions of blood extravasated coagulate less readily than the last portions. If this doctrine is true, it follows, that the coagulability of the blood left in the vessels after great hemorrhages is augmented: I have had several occasions to find that it was dangerously augmented.

To take one of the most ordinary cases of hemorrhage—I mean that occurring after labour, or in abortions—we have an instance even after the arrest of the bleeding, the patient is exposed to mishap from the coagulability of the blood remaining in the vessels. Loss of blood produces a tendency to fainting or lipothymia: during an attack of fainting, the motions of the heart are enfeebled, the diastole slow—torpid, for the blood moves languidly in both the *venæ cavæ*, pours itself out in a slow current into the auricle, which it sluggishly distends, and sometimes is then instantly converted into a solid clot. If a clot be formed in the right auricle, it will also be formed in the *iter ad ventriculum dextrum* filling up the cone of the tri-cuspid valve; and the nucleus of it will cause the coagulum at length to occupy the cavity of the right ventricle

and extend itself to a greater or less distance along the tractus of the pulmonary artery. If the whole pulmonic side of the heart should be perfectly occupied in this way, the death of the individual would be instantaneous; and I doubt not that many of the examples of sudden death, after delivery in hemorrhagic labors, are produced by the formation of cardiomorphous coagula which form in the instant of a state of fainting or lipothymia. It is understood, that the young Princess Charlotte, whose death at Clermont cast a mournful gloom over the whole British Empire, died within fifteen minutes after the birth of the princess, and that there was no very considerable hemorrhage, no laceration, nor other incident that might explain the suddenness of her decease. Many women are known to perish in this manner. I have been the eye-witness of instances of the kind. I have also seen a very great number of persons, who appeared to me to be in danger of perishing in the same way, but who escaped a fate so deplorable. I am aware also of instances in which women, after considerable hemorrhagic losses, have been esteemed by their physicians to be what is called doing well, during a space of from one to seven days, but who afterwards becoming *instantly* extremely ill, have perished without remedy in from two to twenty days thereafter.

If a surgeon, desirous to reduce a luxated humerus, should attempt to do so, he might find the resistance of the muscular contraction so great as to prevent his success, and he would therefore probably resolve to take away the resistance of the muscular contraction, by bleeding his patient *ad deliquium*. The surgeon knows that the deliquium would take effect upon the loss of a much smaller quantity of blood if the patient should be placed upon his feet in a standing posture, than if he were to recline upon his bed in a low recumbency. He would bleed the man while in an erect position. This ordinary practice is conformable with the dictates of experience in all cases of fainting, for it is well known that an individual will faint more readily in a vertical than in a horizontal position; and the first idea that is obvious to any medical man in a case of fainting is this—that he shall cause the patient to be laid with the head very low, taking away for the time even the pillow. I have, on many occasions, besides taking away the pillow, found myself under the necessity of elevating the foot of the bed by placing books or blocks under the lower bed-posts in order to favor the determination of blood

to the encephalon; for I conceive that in all cases of fainting the brain has become oligæmic.

I may assert the opinion here, that fainting is oligæmia of the encephalon, and that a hyperæmia of the encephalic bulbs is the very converse of and absolutely incompatible with the state of swooning. To raise up a woman who has within the few days past lost a considerable quantity of blood is almost inevitably to bring on delequium. Now, if the idea be just that hemorrhage renders the remaining blood more coagulable, then it follows that to take the woman out of bed, or to let her sit up in bed, is to expose her to the hazard of forming a coagulum in the right auricle, which, by the extension of the nucleus, may fill the ventricle, occupy the aperture of the tricuspid, and pass several inches upward in the course of the pulmonary artery and its branches. Monthly nurses, and the ordinary attendants of the sick, know nothing of these things, and they hesitate not, oft-times, to exhort or to permit the anæmical accouchee to rise and sit for a few moments for purposes that might be answered without quitting the horizontal position.

A lady was taken in labor in the afternoon. She sat in her arm-chair all night without sleeping: at five o'clock in the morning she placed herself upon the bed and the child was born in half an hour. The placenta was spontaneously and perfectly extruded, nothing being left in the womb: it was her fifth labor. Within an hour she had hemorrhage—the vagina and uterus contained large coagula which were turned out by the physician, whereupon the hemorrhage ceased: she may have lost altogether some thirty ounces of blood. He remained near her for several hours. At mid-day, throughout the afternoon, and during the following night, she appeared to be perfectly well. At half-past nine the following morning the physician made his visit; she was without pain or the least indisposition, nor had she any symptoms, save those which appertain to a healthy accouchee. Her pulse was about 75 beats per minute; the respiration, temperature, and hue, satisfactory to the medical attendant; her complacency, physical and moral, was absolute.

The physician left her at 10 o'clock in the morning. Being summoned again, he reached her apartment at one P. M. and found her in a state which led him to suppose that she might be near dying. The pulse was 164 per minute, very feeble and thread-like; the hands were cold, and the respiration was performed apparently by the strong effort of her will

only. The respiratory acts were performed with great violence, and without rythm. Auscultation of the heart disclosed a feeble impulse, with great irregularity of the systolic action. She had lost no more blood beyond the ordinary lochial discharge; the vagina, which was examined contained no coagulum.

When I came into the apartment at three o'clock, P. M., she supposed herself to be in a dying state, and asked me if I thought she would live half an hour. It is difficult to conceive of a spectacle of more extreme physical distress than that presented by this dying lady. Every respiratory act was attended with violent pain referred to a place near the lower extremity of the sternum, as in angina pectoris. Palpation of the abdomen and questions relative thereto, showed nothing normal there. Upon retiring for consultation, I expressed to my medical brother the opinion that the pulmonary heart was filled with a coagulum or false polypus; the prognostic, therefore, was necessarily fatal.

She had been left at ten o'clock in the morning with a pulse at 75, and in the course of the forenoon she had been taken close-stool for the purpose of evacuating the bladder of urine, immediately after which she was ill, and the physician sent for.

I made this diagnostic upon these grounds, viz.: I said, there is no pathogonical principle that I know of that can explain the change of her pulse from 75 to 16 $\frac{1}{4}$, in so short a time, save that of a mechanical obstruction formed by a clot or tampon filling up the cavities of the heart. It is clear that there is no scarlatina, no variola, no fever of any kind--no attack of Asiatic cholera nor other malady that is capable of making, so soon, so great a change in the action of the heart as is here observed. The patient had hemorrhage yesterday which has increased the coagulability of her blood; she was taken out of her recumbent position and placed upright in bed, wherupon she became suddenly ill in consequence of the coagulation of blood in her auricle, and there is no power that is able to remove this tampon from the cavity of her heart; it will destroy her as effectually as would a musket ball deposited in the ventricle.

The respiration in this case was carried on, at the time of my arrival, solely by the force of the voluntary power. There seemed to be no rythmical respiration whatever; when she ceased to breathe by her volition, her respiration appeared to be suspended altogether. As might be expected, these voluntary aspirations were not rythmical, but interrupted,

uncertain, having long intervals. The blood that came up from the inferior cava and down from the upper cava, must have passed with great difficulty between the superficies of the clot and the parieties of the heart. It must have moved in small quantities only through the tricuspid, and when distending the pulmonary ventricle, that ventricle could contain but a small portion of fluid blood, being mainly occupied by the coagulum. A similar difficulty existed as to the efflux of the blood along the pulmonary artery, which was tamponed at the time with a cylindrical clot extending several inches along the vessel and its principal branches. Under these circumstances, the quantity of carboniferous blood entering the lungs by the pulmonary artery, for aeration, could be a small quantity only; hence the violent almost spasmodyc protracted efforts to aspire the air of the atmosphere; efforts which, however great, must measurably fail of the purpose of abolishing the dire sense of pulmonary oppression, or respiratory distress, or, to use a more concise term, asphyxiation. The quantity of blood in the lungs was too small to receive the endowment of oxygen which is requisite to preserve any individual from a feeling of suffocation; and however thorough might have been the aeration of the small quantity that was there, however brilliant and florid may have been its arterial hue after being breathed upon, the quantity of oxygen imparted to it must necessarily be insufficient so to act upon the nervous mass, the neurine, as to hinder the conscious principle from perceiving the sense of asphyxiation. With a heart situated in this manner—with the utter impossibility of thoroughly oxygenating the sanguine mass, the innervation gradually fails—a failure which is manifested in the decadence and ultimate overthrow of the various functions. All the functions are but the expressions of the biotic force that is sent down by the encephalic bulbs and spinal cord to the distal points of the nerve-fibrils in the organs. Every acinus of a gland is alive solely by the nervous force which comes into it by the fibril that connects it with the nervous mass, to obey whose mandate is to live, while to fail of receiving it is command to die; the same is true of every part and particle of the histological constitution.

As the encephalic bulbs certainly cease to irradiate the organs when they themselves cease to receive through the oxygeniferous streams injected into them by the carotids and vertebrals, the supplies of oxygen which alone enable them to evolve the life force; the nerve force, the *lebenskraft*, the

biotic force—it follows, that the organs die in the same ratio as those bulbs fail and perish.

One is not surprised, therefore, upon observing that a person in good health, like this unfortunate lady, the right side of whose heart becomes suddenly, instantaneously tamponed by a coagulum, should fall a victim, and that speedily, not to the presence of the clot alone, but to disease developed in other parts, whose life is overthrown in consequence of the obstruction of the prime organ of the circulation. Only a few hours could pass with a large coagulum in the heart, before the pericardium would begin to be filled with serum, or the embarrassments in the pulmonary circulation seek in vain for relief, by pouring out a vast effusion of water into the cavities of the pleura; or the innervative force being withdrawn from the viscera contained within the abdomen whose venous blood is prevented from flowing off through the pulmonary artery, there is set in motion in the peritoneal sac, a tide of effusion filling it up in the course of a few hours.

In all such cases as those of which I am speaking, the escape of the blood from the venous side of the sanguine circle is retarded, with the effect of producing enormous engorgements of all those venous branches, which usually and readily allow their products to run off through the ascending and descending cavæ. Let the reader perpend for a moment the condition of that portion of the vascular system which receives aortic injections by the cæliac and the superior and inferior mesenteric arteries: let him reflect that the whole of this torrent, which is entirely expended upon the chylopoietic and alimentary organs, is first collected by the capillary radicles of the portal vein, then distributed again upon the capillary termini of the hepatic porta, whence it is a second time collected to flow off by the hepatic veins. Now, if the auricle and ventricle are tamponed by an endocardial coagulum, this whole torrent is inevitably arrested, and the cavities become immediately engorged by the continued injections from the aorta, leaving no grounds of astonishment as to sudden or fatal derangement of the healthy state of the tissues that are developed by it.

The time required for extinguishing the life of the sufferer is a variable time; one relative to the magnitude and extent of the coagulation. I can imagine that in the case of the Princess Charlotte, already alluded to, a coagulum was formed which filled the heart so completely, as to put an end to its action within fifteen minutes after the birth of the prin-

cess My patient above mentioned, lived forty-eight hours after the occurrence of the accident, during which time she suffered the most inexpressible distress. She filled her pericardium with serum, while her peritoneal cavity became also the subject of a great effusion. Upon examining the heart twenty-four hours after decease, one might feel surprised that her life could be so long protracted, since the auricle, tricuspid, and ventricle were completely tamponed with a clot which was not an enthanasial clot, but consisted apparently of a firm, whitish-yellow mass of fibrine, out of which every particle of haemato-globulin had been washed away or expressed. An enthanasial clot is, in my opinion, necessarily a red one; a pre-enthanasial one ought to be white.

A patient in this city was delivered early in the morning. Soon after the birth of the child and the delivery of the placenta, the physician descended to the breakfast room, having given strict charge that the patient should preserve the recumbent position, and be kept quiet. While at his breakfast, cries from the top of the stairway called him, for "God's sake," to hasten to the assistance of the patient. In a moment he was at her bed-side, where he found her already dead, having fallen backwards across the bed with her legs hanging over its side. He was told that she had said to her nurse, "I wish to get up,"—"The Doctor says, madam, you must not get up, if you please." "But I must get up, I will get up." She threw her feet out of the bed, and rose up sitting on its edge; her head reeled to and fro, and she fell back and expired. No examination was made of the dead body, but I ask the reader to explain the cause of this sudden death, otherwise than by the rationale that her heart ceased to beat because it became instantly filled with an immovable clot.

Man cannot die, save by the cessation of activity in the brain, or in the heart or in the lungs: he lives within this triangle and can only escape at one of its angles. He must die by the brain, or by the heart, or by the lungs. It is to the last degree improbable that this woman perished solely because her brain ceased to evolve; but if it did not *instantly* cease to evolve, it must have continued to be the cause of motion everywhere. If the heart, as I suppose, became instantly filled with congealed blood, so that it could no longer receive nor discharge any portion of that fluid, the nervous mass would cease to live as soon as it should have consumed all the oxygen contained within its capillary vessels at the mo-

ment of the arrest of the cardiac circulation. The patient died by the heart.

A lady was confined in a natural labor, giving birth to a healthy child, at term. She lost a considerable quantity of blood at the time of the extrusion of the placenta, which left her feeble and pale. Her physician directed her to be kept quiet. She had a good day and following night. At the morning visit the physician found her comfortable, and her condition was satisfactory to him. Soon after he left her apartment she was seized with violent alarming illness, whereupon he was recalled, and was again present after the lapse of about an hour. Her pulse was extremely frequent, feeble, and small; it continued frequent until the moment of her death, which took place sometime about the nineteenth or twentieth day. On the eighteenth day, I think, I saw the lady, and formed the opinion that she was perishing on account of a false polypus, clot, or tampon in the heart, established there by the imprudent early uprising after a hemorrhage. After her death a great quantity of water was found in the right pleura, while firm, white coagulum, entirely destitute of corpuscles, was detected in the right auricle, filling up very much the cone of the tricuspid, while the ventricular end of it seemed to be torn or threshed to pieces by the *cordae tendineae*, which, during so many days, had been vainly occupied in endeavoring to demolish it. The filling up of the pleura with serum was a natural consequence of the condition of the respiratory organs, quite as much so, but not at all more so, than was the filling up of the peritoneum and pericardium in the former case, consequences of the arrest of the circulation in the cava and its branches.

Towards the end of the year 1848, a primipara gave birth to her first child. She was tall, very slender, and delicate; the placenta was not removed; she lost a good deal of blood. Between forty and fifty hours after the birth of the child, upon being called to her succor, I removed the placenta from the *cervix uteri* in which it was grasped and detained. I removed it with the index finger of my right hand. The stench of it was noisome to the last degree. The putrid odour of it remained upon my hand for twenty-four hours, notwithstanding every effort to remove it. The patient was pale, and her pulse somewhat frequent, presenting the usual characteristics of the anaemic pulse. On the following day she was comfortable; the milk was secreted, the lochia healthy, and she was doing well, though still very pale. On

the seventh day she was placed in a chair before the fire, sitting up: she immediately felt sick, was put to bed, and I being called in to see her, told her friends that she had formed a fatal coagulum in the heart. She lived about forty-eight hours after the accident; I did not examine her body. I leave the reader to judge whether my diagnostic was or was not probably correct. She had a pulse upwards of 160—the impulse of the heart feeble—the respiration disturbed—frequent.

On a great many occasions since I have been a practitioner of medicine, I have been called to see patients, who, after hemorrhagic labors, have disobeyed my injunctions as to horizontal rest, and who, being prematurely lifted upright in bed, had fainted. I have not a doubt that among those of these persons, in whom I found the heart fluttering, irregular, and feeble in its action on my arrival, incipient coagulation existed. I have thought as I entered the room of a patient, that her auricular blood had begun to thicken, but was driven out from the auricle before its thorough coagulation, in consequence of the startling effects of a dash of cold water upon the face, or clapping the hands, or snatching the pillow from under the head and shoulders, allowing the head to fall so as to favor the restoration of its vascular tension or even hyperæmia, and thereby re-establishing the perfect and powerful extrication of its innervative force. The re-excitation of the innervative force of the brain would probably soon enable a heart so situated to discharge itself of the inchoate coagulum.

It is not needful that I should draw out this paper to any great length; nor that I should discuss the reasons why so many autopsies present the evidences of the endo-cardial clot of which I have spoken, without having excited in the mind of the attendant practitioner, the suspicion of its presence before the death of the patient. It appears to me to be enough for the present occasion, to propound the question, Can a patient with a white clot in her auricle and ventricle recover? If such a clot be a small one, the pulmonary circulation, although checked, is not necessarily suspended, but the nucleus of such a clot, like the nucleus of an urinary calculus, tends constantly to increase in size, and hence a small coagulum, which strangely disturbs the action of the heart, may consist with a considerable protraction of the struggle against its fatal power over the circulation. The gradual augmentation of the volume of the clot, and its extension into the pul-

monary artery and its branches must in every case lead to an inevitable dissolution. I have not the least confidence in the power of alkaline medicines to dissolve such coagula, nor do I admit that the dull white endocardial coagulum so often discovered is the result of a state of endocarditis; but I rather attribute its occurrence to a temporary stasis or near approximation to stasis during a state of fainting in an exhausted patient. Its occurrence after hemorrhagic labors, or upon the almost total suspension of the circulation at the cessation of an attack of puerperal eclampsia ought not to excite surprise. If a coagulum should fill the auricle and the tricuspid valve completely and at once, the death would be almost instantaneous and the clot would be found red. If process of its formation should be long protracted it would be dull white.

I did not design in this paper to speak at all of the enthanasial coagulum; it is perhaps quite normal that some portions of the blood last reaching the heart, at the moment of death, should congeal there.

In regard to the diagnosis of cases in which the endo-cardial coagulum becomes suddenly constituted, as in the examples I have spoken of, it appears to me that the medical observer, in order to make it, must resort to a method which is only to be fitly characterized as transcendental diagnosis. It is true that the feeble impulse and almost complete suspension of the sounds of the heart, might serve as a quasi physical diagnosis of however little value.

By transcendental diagnosis I mean one made by a process of the mind, fitter to be called sentiment or conviction, than a regular ratiocinative progress.

To enter an apartment one has quitted only half an hour before, and find a patient hopelessly ill with signs of imminent death, yet who had no serious symptoms of illness before—to find her making desperate voluntary efforts to breathe, without any signs of laryngeal or phrenic or pulmonary inflammation or accident—to see the face pale and ghastly—to observe her conscious sense of impending asphyxiation from loss of oxygen—without the leaden or iodide hue of a general cyanosis—These are the grounds of a diagnosis which may be called transcendental, one in which the consciousness of the physician informs him that a mechanical obstruction within the heart exists, and that such an obstruction alone can give rise to the phenomena.

In all the lingering or sudden progressions of the accident-

al disorders supervening in endocardial coagulum, no purely cyanotic manifestations have met my observation.

Writers on cyanosis mostly refer to the cyanotic symptoms to the backing of the carboniferous blood of the veins into the capillaries. You, Messrs. Editors, are aware that I have maintained the opinion that cyanosis is, in its essence, not blueness of the surface, but a state of the nervous mass produced by the absence of oxygen in the brain-capillaries.

The writers, and among them, perhaps in chief, Professor Rokitansky in his *Pathologischen Anatomie*, contend that cyanosis depends most commonly upon the constriction of the orifices of the great vessels of the heart, preventing the venous blood from escaping from the cavæ by the routes of the heart. Now I aver that no obstructions existing in the vessels of the heart can be more complete than that depending upon a large endocardial clot, or tampon; and yet I venture to say that under circumstances of such kind the victim perishes without manifesting the peculiar livor or cyanotic tinge which characterizes the forms of the malady, that are connected with open foramen ovale and imperfect action of Bottalli's valve. It is my clear conviction, that as long as the respiration can be carried on in endocardial clot, the blood, however small in quantity that reaches the lung passing along the superficies of the clot, is highly charged with oxygen. While, therefore, oxygeniferous blood continues to reach the brain, the patient, though conscious of the want of oxygen in due quantity, is in a state different from that of one who injects only carboniferous or venous blood into the neurine of the encephalon.

My intention was to speak only of the white clot, the false polypus, to show the probability of its being formed under circumstances of deliquium, in the oligæmia that follows uterine hemorrhage; and thereupon show how dutiful a thing it is on the part of the attendant physician, to issue the clearest and most precise orders as to the guidance of the hemorrhagic accouchee. I believe that a woman who has lost a very large quantity of blood, and who is prematurely taken out of her recumbent decubitus, and placed upright upon the close-stool —whether in bed or not—incurs a most dangerous risk of a miserable and premature death, from the sudden formation of the heart clot.

I am, gentlemen,

Your ob't servant,

CHARLES D. MEIGS.

—*Med. Exam.*]

ARTICLE II.-

Diphthritee or Membranous Sore Throat, treated by Ammonia and Oil. By T. L. OGIER, M.D.

Membranous sore throat being one of the most fatal diseases to which children are liable, it will not be uninteresting to give a slight history of the following case, treated successfully by volatile liniment given internally.

On the 12th December I was called to see a little girl, three years of age, the daughter of Mr. T., said to be affected with croup. The little patient was breathing with great difficulty with occasional cough, attended with the regular barking sound characteristic of croup, the pulse was very frequent and the skin hot. Upon examination of the throat, the fauces and palate were seen covered with the whitish membrane, establishing perfectly the nature of the disease. The account given by the mother was, that for three days past the child seemed to have a very bad cold and the hoarseness had gradually come on to its present state. Squills had been given occasionally, but, as the hoarseness increased, hive syrup and hippo tea were administered, until free vomiting was produced. These remedies failed to produce any relief, and upon my visit, I found the patient as above described.

In conversing with my friend Dr. Lebby, some time since concerning this disease and the inefficiency of all modes of treatment in arresting its progress, he related several cases of very marked success attending the treatment by ammonia and oil—volatile liniment—recommended to him by Dr. J. A. Johnson. Having seen no very decided benefit from any one remedy hitherto used, I thought this a favorable case in which to use the ammonia. I directed the throat to be rubbed externally with aq. ammonia, and a flannel wet with the same to be kept around the neck, and the following mixture given: fl. aq. ammoniae, ol. olivæ, mellis, equal parts. A tea-spoonful to be given every two or three hours. This mixture was given with some difficulty, the child seeming to experice pain when the mixture was swallowed—it produced free vomiting. This remedy was commenced about 12 o'clock in the day, and continued every two or three hours until 9 o'clock, P. M. A dose of calomel, grs. vi. was then given. This operated during the night three or four times.

The operations were perfectly green and without smell. At my visit early the next morning, Dec. 14th, the hoarseness was the same and the breathing difficult, the pulse continued frequent and the skin hot, but slightly moist. The hartshorn applied externally to the neck had blistered it, I therefore discontinued the application and directed a bread poultice to be continued as before. In the afternoon I found my patient had vomited frequently during the day, and in the matter vomited were seen several portions of the false membrane; the breathing was better and the hoarseness less; the fauces and velum were still white and covered with membrane. Two grains of calomel combined with a half grain of ipecac. were ordered at night. This operated once—the next morning—and the stool presented the same green appearance as before, but had somewhat of a foecal smell. The mixture to be continued in doses as before, but given every four hours. During the day many more pieces of membrane were thrown up and the right side of the throat was almost cleared of it, the respiration was better, the hoarseness much less.

On the 16th, I found my patient much better, the pulse not very frequent and the skin pleasant, still some hoarseness and frequent cough. The ammonia mixture to be given occasionally during the day, and between the doses a teaspoonful of syrup of squills. More of the membrane was thrown up, the throat free from it, no operation on the bowels. 17th. Still continued better, no hoarseness, breathing good, bowels confined. Ordered a dose of castor oil, ammonia mixture to be discontinued, syrup of squills to be continued. 18th. The oil has operated three times, the stools are yellow and the patient lively and comfortable, still coughs a little, no more *croaky* symptoms, ordered squills to be given occasionally, and flax-seed tea. The child continues to improve, having had no return of hoarseness and the cough gradually ceasing.

I think the throwing off of the false membrane in this case may be attributed to the stimulating effect of the ammonia on the mucous membrane, and not to the mechanical efforts of vomiting. Other emetics, as zinc, tartar, and ipecac., failing to produce the effect, though carried even to exhaustion. The ammonia is inhaled at the time the medicine is given, and then again when the patient vomits some of the vapor gets into the trachea, and it is in this way that the ammonia appears to act. Doubtless when the membrane is then loosened by the new action, excited by the hartshorn,

the effort of vomiting assists in detaching it from the surface. In many cases of diphthorite, death does not take place until the false membrane extends throughout the trachea and bronchi, and even to the small ramifications of the bronchial tubes. Post mortem examinations always exhibit the smaller bronchial ramifications completely choked with this false membrane. As far as my observations have enabled me to form an opinion, the disease always commences in the fauces and larynx and extends gradually down the windpipe, and it is not until after the patient had been ill for some time, that we find the bronchi and lungs affected. In some cases the patient dies from suffocation before the disease has had time to extend half way down the trachea, and when there is much swelling about the throat, and the false membrane is formed rapidly and thick, the larynx is completely closed by it and the patient suffocates, while the trachea and bronchial tubes are perfectly healthy. It is of great consequence, therefore to apply our remedies whatever they may be, early, for if the patient avoids suffocation in the first stage of the disease, the membrane extends gradually down into the lungs and will soon be beyond our reach.—*Charleston Med. Jour.*

ARTICLE III.

On Influenza and Ozone. By Dr. SPENGLER, of Eltville.

Dr. Spengler remarks on the incomplete state of our knowledge of the etiology of epidemic diseases, and the present crude theories of their dependence upon certain indefinite degrees of heat or cold in the weather, will no longer be admitted; but that by following up the discovery of ozone by Schonbein, we shall, having a tangible point whence to start, arrive at the clearness of truth, instead of the darkness which has hitherto hung over the subject.

He states, that in the village of Roggendorf, in Mecklenburgh, towards the close of 1846, slight catarrhal affections became prevalent—that but slight trace of ozone was then to be detected in the air. With the opening of the following

year, however, these catarrhal affections assumed the most severe forms of tracheal and bronchial disease, and hooping-cough became common, both among children and adults; then reagents detected a great increase of ozone in the atmosphere, and, at the same time, influenza spread over the district.

On the 9th of January, the *ozonometer* showed a still further increase in the proportion of ozone present in the air. On the same day two persons died of influenza, and gradually the influenza spread more extensively, until, on the 21st, scarcely an individual had escaped. Thus there seemed a decided connection between the presence of ozone in the air and the spread of the epidemic.

Ozone is formed in the air by the decomposition of its water through disturbances of its electrical equilibrium; hence the peculiar pungent sulphurous and phosphoric odor. The nature and composition remains as yet uncertain. Sulphuric, probably also telluric and selenic acids, and phosphoric acid, destroy it. A very small proportion of the vapors of ether or alcohol, or of olefiant gas, will also [prevent its development.

Its best test is iodide of potassium, which will detect its presence in infinitely small quantities in the air. A piece of paper moistened with a mixture of starch and solution of iodide of potassium forms an *ozonometer* far exceeding in delicacy the most accurate galvanometer or the most sensitive nose. The smallest quantity of free ozone (even only in the proportion of a hundred thousandth,) when neither galvanometer nor eudiometer show any change in the air, will be rendered manifest by the discoloration produced by the free ozone.

At the beginning of the epidemic we have noticed there was but slight discoloration: it gradually became darker, till at last the ozonometer exhibited a blackish-brown color.

As the presence of ozone in the air is due to its electrical decomposition, it is necessarily influenced by its electrical tension.

If the prevalence of influenza and epidemic catarrh be owing to ozone, the vapors of sulphur, or sulphurous gases, must be protective against it. This is confirmed by, while it explains the immunity of, those engaged in or living near sulphur-works.

Dr. Spengler has been induced to publish his observations with the hope of inducing others to make further investigations into the existence and nature of ozone.—*Lond. Med. Gaz.*

ARTICLE IV.

On Muriate of Opium. By J. G. NICHOL.

During the last ten or twelve years I have made and prescribed a solution of opium, which, I think, is not mentioned in any work on *Materia Medica* with which I am acquainted. I use powdered Turkey opium and water, pretty strongly acidulated with muriatic acid. I have found, by experience, that this is the best anodyne I am acquainted with. I see, by Dr. Pereira's *Materia Medica*, that mention is made of Dr. Porter's solution of opium in citric acid. I made and used the same sort of preparation ten years ago; but it didn't answer. It caused a great deal of headache, and other unpleasant symptoms: moreover, it became muddy, and appeared to be decomposed; therefore, I gave up using it. I have called this preparation of mine Muriatic solution of opium, but perhaps it is not a very correct name. I may mention that I prepared solutions of opium with acetic, nitric, sulphuric, citric, tartaric, and muriatic acids, and also prescribed them, but the muriatic solution was vastly superior to any other in every respect. All of them produced *headache except muriatic*. I prefer muriate of opium to the tincture, wine, or powder of opium, and also to the muriate and acetate of morphia; in fact to any other preparation of opium. It never makes any headache but all the other preparations do.

My preparation is made according to the following formula:

Take of the best Powdered Opium,

Muriatic Acid, a $\frac{3}{4}$ j.

Distilled Water, $\frac{3}{4}$ xx. M.

Shake this mixture very frequently every day, during fourteen days, then strain and filter. The dose is from twenty to forty drops, according to circumstances. Many of my medical friends have tried this preparation, and highly approve of it.—*Dub. Med. Press.*

ARTICLE V.

Belladonna in the Nocturnal Incontinence of Urine in Children.

"M. Troussseau narrates the case of a girl, five years old, who since her third year had been a victim of this obstinate complaint. No effort was neglected on the part of the parents to remove the habit; but all the means adopted, some of them sufficiently severe, were without effect. A pill containing one centigramme of the powder and half a centigramme of the extract of belladonna, was ordered to be taken every night at bed-time. During the first week two nights were passed without accidents; and from that time, with two or three exceptions, the complaint entirely disappeared. The treatment was resumed from time to time for nearly a year. This is only one of several cases occurring as well in his own practice as in that of M. Bretonneau, in which Prof. Troussseau has observed marked benefit from the use of this drug."

L'Union Med.

"In a more recent number (Oct. 21) of the same Journal, Dr. Blache, physician to the Hopital des Enfans, records two very obstinate cases of nocturnal incontinance of urine occurring in individuals, one fifteen and the other eighteen years of age, where mercurial and sulphurous baths, refrigerant and astringent applications, tonic and ferruginous medicines, tannin, ergot of rye, nux vomica, and all other means had failed. Ultimately belladonna was exhibited with complete success.

ARTICLE VI.

Influence of Cutting the Hair on Health. By Dr. FREDERICQ.

A beautiful child, æt. 3 years, had long hair descending to her shoulders. But she for some time lost flesh and became dull, lost her color and appetite. No organic lesion was discoverable but a souffle was heard in the carotids. Chaly-

beates failed to improve her condition. Her beautiful hair was then sacrificed, and her health was soon after restored.

The supply of coloring matter to so much of it had exhausted the haematosine of the blood. Hair being badly nourished, often falls after illness, and is not always reproduced. It is then advisable to cut short the hair of the convalescents.

[In females it is quite common to meet with this result. The editor never remembers to have witnessed its occurrence in a male. The practice suggested is generally adopted, but not on the scientific principle here set forth. Ed.]

—*Flanders Journal.*

Part 4.—Editorial.**ARTICLE I.****REPORT OF DR. EDWARDS—PATENT MEDICINES.**

We have had occasion heretofore to bear testimony to the valuable service rendered to the profession by this gentleman, from his place in Congress. As a general thing we dislike to see a physician deserting the profession for the purpose of embarking in politics, but in this case we are obliged to suppose that Dr. Edwards has accomplished more for the profession and the community than he could have done merely as a general practitioner. So far as we now recollect, he is the only member of Congress who has ever undertaken to vindicate the claims of physicians to the respect of the government, or to protect the nation from the gross imposition of the nostrum venders. He deserves the highest praise for his bill to prevent the introduction of spurious drugs and no less for his later effort to strip off the cloak of mystery under which the quack has so long practised upon the credulity of the multitude.

After a careful perusal of this report, and some reflection upon it, we give it as our decided opinion that of all the unprincipled knaves who prey upon mankind, the nostrum monger is chief. The sharp-sighted rascal who palms off his wares at a false estimate is simply contemptible: the quack who trifles with human health is most detestable. Nostrum mongers may be fitly divided into three classes—1st, those who put out innocuous and inert compounds, such as Bristol's Sarsaparilla, Dow's family medicine, etc.; 2d, Those whose nostrums possess some medicinal powers in

which the inventor himself, generally an ignorant person, has confidence, deceiving himself as well as the community; 3d, and most wicked of all, the unprincipled person who obtains a powerful prescription, which should never be administered except under the superintendence of a competent physician, carries it to the Patent Office, swears it is new and valuable and under the broad seal of the national government, scatters it abroad to the serious detriment of thousands. For the accomplishment of their design, this class does not stick at the most infamous perjury. As an instance of this, look at the *vegetable cancer powder*, whose composition is detailed on page 24 of the report. This nostrum is composed of seven parts caustic potash and one part sesquioxide of iron. This imposition was rather glaring, and a patent was refused.

A modest man is struck aghast at the impertinence and assurance of these gentry, to say nothing of their respect for the moral law. Take the following as a sample—the latin contained in which is, as Dominie Sampson would say, “prodigious:” “Thurston’s Anti-Fever Pills: Prescription thereof viz.: sulph quinine, three ounces; rad. rhei pulveris, three ounces; *piperinal plural*, one ounce; acidum sulphuriam dilutum, (quantam sufficit) *formam massam*. Make the above recipe into pills of three and a half grains each.” The italics are our own, and our conscience almost chides us that we have not directed capitals instead, for we presume our readers will agree with us that the recipe evinces a genius capable of producing much more remarkable results in philology than pharmacy. But this great skill in the classics availed nothing. The commissioner chanced to know that quinine had been before used in the treatment of intermittents, and refused a patent. Here is another *new* and useful invention. John E. McClure’s preparation for the cure of gonorrhœa: “Oil of cubeb, three drachms; spts. nitre dulc., six drachms; bals. copaiba, one and a half ounces; simple syrup, two ounces; comp. spts. *lavendula*, three drachms; tinc. cantharides, one and a half ounces; oil balsam copaiba, one and a

half drachms; *theberiac* tincture [this we suppose is an effort at thebaic tincture, the old term for tinct. opii,] one and a half drachms." Unfortunately for the purse of this personage, the United States declined giving him the exclusive right to vend an old and well known prescription, and extort money from the *unfortunate females* and young bloods of the large towns and cities. Another asks a patent for enclosing anthelmintic medicines in gelatine capsules.

Conspicuous on this calendar of quacks, stand the names of Samuel Thompson and Horton Howard, the apostles of the steam system as it has been called, and which, like other steam machinery, is giving indications of blowing up its inventors. This miserable cheat also came forward and requested the government to throw over it the mantle of protection, and give it a monopoly of gum myrrh, capsicum, and lobelia, and, strange to relate, the Patent Office acceded to the request, giving the impudent mountebank an indorsement which enabled him to compete with competent physicians.

The stronghold of the nostrum is the mystery in which it is enveloped. Mankind are prone to reverence what they do not understand, and the nostrum monger thoroughly appreciates that familiarity begets contempt. So soon as the composition of the nostrum is known, the charm is broken, and the public are ready to swallow down something else, it makes little difference what, provided they do not know what it is. The man who is cured of the ague by quinine disguised as Sappington's Pills, is enraged at the cheat which has been practised upon him, but is ready to swallow the same drug disguised under another name, such, for instance, as Smith's Tonic Syrup. So soon as any quack remedy obtains reputation, apothecaries and pharmacists analyze and imitate it, the secret of its preparation leaks out, and its popularity is at an end. This was the case with Morrison's Pills, Godfrey's Cordial, Bateman's Drops, and divers other villainous compounds, which are now forgotten, or remembered only as serving to illustrate the gullibility of mankind. In all efforts

to free the community from these nuisances, attention must be directed to dispelling the mystery which lends them their magical influence. It would be needless to undertake to suppress them by legislative enactment. This country is entirely too free for that. It may do for the subjects of kings to have their lives protected by law from the attacks of charlatans, but in this free country we insist not only on the right of living as we please, but of dying as we please.

The quack has many allies in his business. There are many editors who are ignorant of the plainest principles of the science of medicine, anatomy, or physiology, and others who think they know something and desire to evince their knowledge by a fling at the profession. These papers have a greater or less influence over their readers. The quack gives the editor a box of his excellent purgative pills or a bottle of his invaluable vermifuge, pays him liberally for advertising, and gets in return a laudatory paragraph in the editorial column. Of course this is not general amongst the gentlemen of the press, but we could name many widely circulated and influential journals which puff quack medicines, and are open advocates of hydropathy, homocepathy, Thompsonianism, etc. Ministers of the gospel, too, are often found ranged on the side of the quack; lending their powerful aid to the support of innovation upon the medical profession, though there is no body of men so jealous of encroachment upon their own. The certificate of a respectable minister is of great value to the nostrum mongers, and is cheaply obtained at the price of a bottle of tar water, or solution of tartarized antimony, scented with aromatics. The quack shrewdly concludes that if he can secure the shepherd, the sheep will not be slow to follow. Druggists and apothecaries all over the country are extensively engaged in the business of vending patent medicines. We suppose there is hardly an establishment of this kind in the country that is not largely embarked in this despicable business. One cannot pass along the streets of our larger towns or cities without being stared in the face

by flaming hand bills, descriptive of the virtues of some wonderful electuary or magical pain killer. Of course this business yields large profits on the capital employed. The proprietor can afford to give the druggist a commission of from twenty-five to fifty per cent., and still have a handsome profit for himself. We do not accuse apothecaries of being actuated in this matter solely by cupidity, for we cannot believe they would, as a body, trifle with the health of their customers merely for money. The error arises partly from ignorance and partly from thoughtlessness, though it is not to be disguised that there are some who embark in the business solely for the profit. We have known the following trick performed again and again: An apothecary has labels struck for Brandreth's Pills, Peter's Pills, or any other that chance to be the rage at the time; he then makes a batch of pills, say the compound cathartic pills of the dispensatory, and fills all the boxes from the same mass. Of course he is much entertained to hear a discussion amongst his customers as to the relative merits of Brandreth and Peters or the superiority of scammony and colocynth over colocynth and scammony. Another stronghold of the patent medicine is the countenance and support of the government. We believe it is right and just that government should protect the mechanic arts, and that the profit of new and useful inventions should accrue to the inventor. But physicians ask no exclusive property in any thing that pertains to the healing art, and promptly denounce as an empiric or pretender any one who makes a mystery of anything that might have an application to the treatment of disease, or the alleviation of suffering. Mystery in medicine is *prima facie* evidence of quackery, and it is unaccountable to us that the patent office has never learned this fact. So long as the national authorities place the quack medicine in the same rank with the cotton gin or the improvements in the steam engine, as a new and useful invention, it is not to be wondered at that newspapers will puff, that parsons will give certificates, that apothecaries will vend

or that the ignorant and hypochondriac will swallow them. Commissioners of patents, we presume are qualified to judge of improvements in the arts, but it is not at all derogatory to them to suppose that they are not competent judges of what is new and useful in medicine; and we suggest that it would be proper for them either to refuse patents for alleged improvements in medicine; or, what would amount to the same thing, refer all such applications to a board of intelligent physicians. We understand that Dr. Edwards introduced a bill prohibiting the issue of such patents, which passed the house of representatives, but failed in the senate for want of time. We sincerely hope the bill will be taken up and acted upon at an early day of the ensuing session. Let the national government at least refuse to lend its influence and countenance to these vile impositions. Here is the first step to be taken by the profession in the suppression of quack nostrums, viz., to unite in the effort to make the provisions of Dr. Edwards' bill a law.

We have in a previous number of this Journal had occasion to notice a bill brought before the legislature of Wisconsin. This bill required every physician to send a written prescription to accompany the medicine administered to his patients. To this we have no objection, for the scientific physician is not afraid of scrutiny; but we would have the same law apply to the quack medicine. We would have an exact detail of its composition accompany every box and bottle, and surely the nostrum vender cannot complain at being put upon the same level with the regular practitioner. With regard to that portion of the press that lends its influence to these cheats, the profession has little to hope: they are not to be reasoned out of their conceit that they are immensely wise, and perfectly well qualified to teach a difficult and abstruse science of which they have the merest smattering; or they are so wretchedly bigoted as to be beyond the reach of appeal or argument. To the praise of the clerical profession be it said, we know many who resolutely oppose the wholesale knavery

practised upon the community by the patent medicine men ; and we believe that those who are entrapped into giving certificates, err more from thoughtlessness than from reprehensible motives. To such it is only necessary that physicians should point out the error which they have committed, and they will abandon it. The most difficult ally of the nostrum monger with whom the physician has to contend, is the druggist and apothecary. Many persons are in the habit of calling upon them for prescriptions, and get some alleged panacea, which purports to cure the disease with which they are afflicted. There are two methods of remedying the evil at this point. In the first place apothecaries, particularly in cities, should be made to understand that they constitute a branch of the profession, and as such should feel themselves above the contemptible occupation of vending quack specifics, or lending their influence to assist the nostrum monger in his despicable business of cheating the simple ; or if they cannot be made to understand this, or prefer profit to honor, it is the duty of the profession of their neighborhood to denounce them promptly, and forego all dealings with them. As things now stand apothecaries can hardly be held reprehensible ; for the profession has taken no combined action on the subject ; but when once the profession takes the matter seriously in hand, we are confident they can induce the majority of the apothecaries to coincide with them in sentiment, and can bring such influence to bear on the refractory as to render them willing to come to terms. On a full view of the subject this evil does not strike us as an irremediable one. If the profession can detach the national goverment from the nostrum-vender by the passage of Dr. Edwards bill, and can procure the passage through the state legislatures, of laws compelling these gentry to attach to each bottle and box, an exact detail of the component parts of the nostrum, we think the nuisance will be pretty well abated, or so far at least as to place it within the power of the physician to give it the *coup de grace*.

The public are most grossly imposed upon by certificates of wonderful cures accompanying these nostrums, any one of which is equally celebrated for curing the most opposite diseases known to our nosology. It may not be inappropriate to drop a hint on this subject, which may be of use to the very youngest members of the medical profession, and put them on their guard against being imposed upon in this way. The quack seeks out some hypochondriac, assures him he has a specific for his complaint; the simpleton places great confidence in the impostor, swallows the potion, feels immensely relieved, and is willing to give the most extravagant certificate of the efficacy of the medicine. Again, many persons feel slightly indisposed, not sick enough to go to the doctor; and fancy that "old Dr. Townsends Sarsaparilla" is just the thing they need, and straightway hasten to the drug store and get a huge bottle of this villainous compound of Sarsaparilla, Pipsissewa, Dock roots, and enough of the "critter" to give it a flavor. They are cured of course and feeling grateful to heaven and "old Dr. Townsend," are ready to give the most extravagant certificate, which is inserted, in prominent type, in the next day's paper, stating that the highly respectable Mr. McSpadgen, was cured of dyspepsia, scrofula, liver complaint, and consumption, by one bottle of this invaluable remedy. These certificates always remind us of the Irishman who went to a physician to consult about his wife. The doctor gave him a blister, telling him it was to be put on her chest. Meeting Paddy a few days afterward, the doctor inquired after the woman's health, and learned that she had entirely recovered. "You put the blister on her chest, did you Patrick?"

"No doctor, we have no chest, but I put it on the lid of an old trunk, and found it answered just as well, for she began to get better from that hour. Oh its a mighty great medicine is the blisther entirely."

Think you Paddy would not have given a tremendous cer-

ticate of the efficacy of the blister on the *chest* or on the *trunk*?

The public does not, as a general rule, rightly appreciate the motive which induces the physician to denounce nostrums. It is thought by many that the quack medicine diminishes the fees of the profession. This is, we suppose, a mistake, if the nostrum is detrimental to the health of the community, of which there is no doubt, it is hardly to be supposed that the physician's fees will not be augmented. We will give an instance in point.

A man contracts syphilis; to avoid expense he buys some reputed specific for which he pays one or two dollars; while using this the disease extends its ravages, the system becomes contaminated, and the patient is compelled to place himself under the direction of a competent medical man, and undergo a course of treatment involving a great sacrifice of time, and accompanied by a heavy bill of fees. Had he applied in time, the application of a stick of caustic would have removed the disease at a trifling expense, and saved him a vast amount of inconvenience and suffering. This is not an isolated, case and will serve to illustrate the position assumed above. The objection of the profession rests on other grounds. The nostrum is a satire upon the profession of medicine, and so far as successful has a tendency to bring our noble science into contempt with the intelligent, discerning portion of the community. Of course this is an aggression upon our honor not to be tamely borne. The dignity of our profession demands that it should be resented. Physicians are the regularly constituted overseers of all that pertains to the health of the community in which they reside, and it is their imperative duty to set their faces resolutely against anything that is judged to have a pernicious tendency upon the physical well-being of their patrons. These are the grounds of objection to the quack medicine. If any nostrum is known to be really valuable, the regular profession never hesitate to analyse and

imitate it in their prescriptions, for there is no patent law that would prevent them from so doing.

We commend Dr. Edwards' report to our readers, hoping that each one will peruse it for himself, and circulate it amongst his friends, as we are confident that the diffusion of knowledge on this subject, will go far to rid the community of the rascally impositions practiced by the nostrum monger.

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ARTICLE II.

AMERICAN MEDICAL ASSOCIATION.

The late meeting of this body, held in the city of Boston by adjournment, from the first to the fourth of May inclusive, was the largest assembly of medical practitioners ever held on this continent, if not in the world. The number of members present was four hundred and fifty four. In addition to these, a large number of the physicians of Boston and its vicinity were occasionally in attendance.

Nearly all the States of the Union were represented, from Maine, the extreme North East, to Louisiana and Iowa in the South and West, so that it may more properly be called a National Institution than at any former period of its existence.

The arrangements made by the committee appointed for the purpose were admirable. The numerous public institutions of Boston and vicinity, were thrown open to the members, and the most sumptuous entertainments were given by Drs. Warren, Biglow, Hayward, Homans, and Mr. Abbott Lawrence, and by the physicians of Massachusetts at the Revere House.

Without the means of obtaining an abstract of the proceedings of the Association from the records, we can give but a synopsis from memory, and the reports published during its sittings.

We are happy to say that with the exception of a little confusion occasionally, for the want of a knowledge of parliamentary rules, (which practitioners of medicine have little use for at home) the business was transacted with the smoothness of clock-work, without the aid of *very* much labor in working the wires.

At eleven o'clock Tuesday May 1, the delegates were called to order and addressed briefly by Dr. Warren in behalf of the Massachusetts Medical Society; after which Dr. A. H. Stevens, President, delivered an address which we shall notice more fully hereafter.

A committee of one from each State represented, was appointed to nominate officers for the ensuing year, and the Association adjourned until half past three o'clock in the afternoon.

The Association met pursuant to adjournment.

Upon the nomination of the committee appointed in the morning, the following officers were unanimously elected.

President. Dr. John C. Warren of Massachusetts.

Vice Presidents. Drs. John P. Harrison of Ohio, H. H. McGuire of Virginia, Austin Flint of New York, and R. S. Stewart of Maryland.

Secretaries. Drs. Alfred Stillé of Pa., and H. J. Bowditch of Mass.

Treasurer. Dr. Isaac Hays of Pa.

A committee conducted the President to the chair, upon which he said:—

GENTLEMEN:—The honor you have now conferred on me, in electing me to be your President, I accept with unfeigned diffidence. The chair of your presiding officer has been filled by gentlemen of the highest talents and experience of whom our country can boast; and I feel myself entirely inade-

quate to fulfil the duties of the post you have assigned to me in a manner to do justice to the importance of this great association. On your kindness I must rely for aiding and supporting me in unravelling the difficult questions which so often arise in deliberative assemblies.

Gentlemen—The objects for which you are this day convened are worthy of your best attention. In the foremost rank is the improvement of medical education. Education is the parent of Science, and Science it is which has led to the vast discoveries of the present day. By her aid we have seen drawn from the heavens and plucked from the deep those agents which enable us to communicate with the most distant regions, and to enjoy and exchange the products of our mutual labors. It is by education and by science that the great political revolutions of the present day are to be settled in an orderly and permanent way, so as to insure the tranquillity and happiness of the civilized world. Whence the vast difference in the conduct and consequence of the revolutions of Southern and Northern America? Is it not to be sought in the difference of education, which in the one presents us an enlightened population, and in the other the great masses in a state of ignorance, prejudice, and violence?

Medical education has sprung up in different parts of this country, according to the exigencies of different communities. There is a want of uniformity in the mode of instruction and in the qualifications for practice. It will be your business to point out, representing as you do every part of this great country, the principles on which should be founded a satisfactory medical education. If you can accomplish this, of which there is no doubt, you will apply the surest remedy to the root of the prevailing evils which spring from empiricism and falsehood.

Another object which will no doubt arrest your attention is the means of preventing disease. Hygiene is a department of our science which we must think has been too little studied, when we reflect how much easier it is to prevent disease than to cure it. You will perhaps consider it necessary to propose to all medical institutions that a department should be established for instruction in the means of preserving health. How important it is that the public and individuals should be better informed on this subject! In the use of articles of food for instance, which while they are so requisite to health and life, are often made the vehicles of disease!

"To our profession in a good measure is to be attributed a revolution, already accomplished in part, in regard to the use of stimulant drinks, which does honor to the country and the age which produced it.

The vital air is sometimes the medium of disease. By it are transmitted the miasmata which propagate great epidemics, carrying with them desolation and death. The source of this miasmata must ever be one of the most interesting objects of research to the medical philosopher—a dark and difficult research indeed, which at first view might appear hopeless. Observation has, however, shown us one remarkable fact relating to this subject—that the great epidemics of plague, yellow fever, and cholera, have never yet invaded the regions south of the equator. What a singular anomaly in the history of natural events! Yet we find an analogy still more remarkable, because in its influence more extensive in the law which has ordained that the animal and vegetable productions of corresponding latitudes South and North of the equator scarcely ever present a similarity of species. Perhaps we may hereafter find that in those Southern regions the direction of the atmospheric waves is such as to roll back from those countries the miasmata of plague, yellow fever, and cholera.

At the appearance of cholera the best efforts of our profession should be awakened. This gigantic spectre arising from the dark morasses of the East, and pursuing its course where it finds the food required for its propagation, has a second time crossed the Atlantic, and will afford us fresh opportunities of studying its character and progress, if not of discovering its origin and cure.

The cure of disease, gentlemen, is after all, your ultimate object. In the accomplishment of this, every age has flattered itself with being wiser than the past. The present may, perhaps, apply to itself, with justice, a degree of this flattery. It must, at least, have the credit of acknowledging its own ignorance, and of knowing that in order to pursue its investigations it must closely observe the course of nature in resisting the progress of disease, and in the means by which the endeavors to remove the derangements of the animal economy. "*Natura duce*" is the motto of our Society, and guided by this maxim we are sure to arrive at results which will conduct us to a satisfactory and successful practice.

The reading of reports being in order, Dr. D. Francis

Condie, as its chairman, read part of a lengthy report from the Committee on Practical Medicine, but before it was through the reading was suspended, and the report referred to the Committee on publication. Adjourned until 10 o'clock to-morrow morning.

Wednesday Morning May 2d, 10 o'clock. The Association met pursuant to adjournment.

A motion that reading reports in full be dispensed with, and that the chairman of each committee have the privilege of reading such parts as he deemed of most interest, having passed, it cannot be expected that we should attempt even a synopsis of these valuable documents until they shall be laid before us in their printed form.

Dr. N. R. Smith of Maryland, Chairman of the Committee on Surgery, read a lengthy and able report. This document dwells at length upon the improvements in surgery, and highly approves of the use of Anaesthetic agents in general. The report was referred to the committee on publication.

After some discussion in reference to the rights of permanent members, involved in a proposed amendment to the constitution, the subject was referred to a committee. Dr. Stevens of N. Y., Wood and Condie of Phila., Arnold of Savannah Ga., and Knight of New Haven Con., were appointed.

Dr. Chandler R. Gilman Chairman of the Committee on Obstetrics, then read the report from that committee, which dwelt at length upon the use of Anæsthetics in Midwifery not only approving of their use but contending that they may not be rightfully withheld. The report was referred to the committee on publication.

The Association took a recess.

Afternoon Session. — The next business was reading the report of the Committee on Medical Literature, by Dr. John P. Harrison of Ohio, the Chairman.

This report attracted the attention of the association, and elicited an occasional burst of applause for its pointed hits. It was written in the peculiar style of Prof. Harrison, and

although many parts of the report were omitted, enough was given to show that a large part of the field of medical science was under cultivation. A synopsis will be given hereafter. The report was referred to the committee on publication.

The report closed with some recommendations for promoting the growth of our medical literature, which were referred to a committee composed of Drs. Horner, Condie, and Hays, of Pa.

Some discussion in reference to the subject of an international copy right law, took place in this connection. And on motion of Dr. Wood, the same committee was instructed to report on that subject also. In urging this motion Dr. Wood remarked.

That it was essential to the medical literature of the country, that an international copy-right law be established. He claimed it for our own writers, who now receive no encouragement. American publishers can now procure and reprint foreign books for a less price than American authors can afford to write them. They must produce a better book, a great deal better book than the English writer, or they cannot find an American publisher who will pay them for their work. He claimed it also on the ground of justice to English writers, who were despoiled of the labour of their head and hands by the cupidity of our booksellers.

The meetings thus far had been held in the spacious Hall of the Lowell Institute, but the Hall of Representatives in the State House, the use of which had been voted to the Association, being left vacant by the Legislature, the Association adjourned to meet there at 10 o'clock to-morrow morning.

Thursday May 3d. The Association met pursuant to adjournment.

On motion of Dr. I. Hays, Dr. Agassiz was elected a permanent member.

The nominating committee, agreeably to former instruc-

tions, reported nominations for the standing committees, the chairmen of which we are able to give as follows.

On Medical Sciences, Dr. Usher Parsons of Providence R. I. Practical Medicine, Dr. J. K. Mitchell of Phila. Pa. Surgery, Dr. R. D. Mussey of Cinti. O. Obstetrics, Dr. T. G. Prioleau of Charleston S. C. Medical Education, Dr. J. Roby of Baltimore Md. Medical Literature Dr. Alfred Stillé of Philad. Pa. On Publication Dr. Hays of Philad. Pa.

A Resolution offered by Dr. A. H. Stevens of New York, creating a standing committee of seven, on each of the subjects of Forensic Medicine, Indigenous Botany and *Materia Medica*, and on *Hygiene*; was adopted

Dr. Luther V. Bell, of Boston, moved to amend the resolution so as to refer so much of the subject of Medical Jurisprudence as relates to Insanity, to a select committee. But the amendment was lost.

The committee on Forensic Medicine as appointed by the recommendation of the nominating committee, is as follows.

Drs. A. H. Stevens of N. Y. Ch. L. V. Bell of Boston. Pliny Earle of N. Y., W. F. Rockwell of Vt., R. S. Stewart of Balt., R. Watts of New York, and J. Knight of New Haven Ct.

From the difference in opinion of different members of this committee, we shall expect two reports from it, and a very thorough discussion of the subject of the Medical Jurisprudence of Insanity in criminal cases.

The other committees were appointed in like manner. Dr. Eli Ives of New Haven being chairman of that on Medical Botany, and Dr. Joseph M. Smith of N. Y., of that on *Hygiene*.

Dr. M. S. Taft on behalf of Dr. F. C. Stewart of New York, chairman of the Committee on Medical Education, presented and read an elaborate report, which embraced a com-

plete account and comparison of the Medical Institutions of Europe and of this country.

It was accompanied by a series of resolutions: A paper prepared by the medical faculty of the Harvard University, giving at length reasons for not extending the lecture term beyond the usual period of four months, also accompanied the report.

Dr. Parrish offered the report of the Committee on Hygiene, for Dr. Winn chairman, who was absent. A motion to dispense with the reading was discussed but decided in the negative. Drs. Jackson of Philad., and Curtis of Mass., read papers as supplementary parts of the same report.

Adjourned to half past three o'clock P. M.

Association met pursuant to adjournment, and resolved itself into committee of the whole for the consideration of the resolutions recommended by the Committee on Medical Education. Dr. Knight of Ct. in the chair. The resolutions were considered *seriatim* as follows.

1st. *Resolved*, That the attention of Medical Colleges be again directed to the resolutions of the Committee on Preliminary Education adopted by the Medical Convention of 1847, and that they be advised to require from students that they shall in all cases produce certificates of preliminary education. *Carried*.

2d. *Resolved*, That the several State and County Societies, as well as all other voluntary Medical Associations throughout the country, be advised and requested to adopt the plan proposed by the Medical Society of the State of N. York, at its last annual meeting, for ensuring due attention to the subject of preliminary education.

Dr. N. S. Davis, of New York, explained that the plan of the New York State Society was, that every County Society should appoint a board for preliminary examinations of students, with a view that they should be required to produce certificates from such boards before they could be received as medical students in the office of any private practitioner.

Dr. Evans, of Chicago Illinois, offered the following as a substitute.

Resolved, That as students are generally introduced to the profession by private preceptors, it is recommended that no students be received by them unless they come up to the standard of preliminary education prescribed by this Association.

Dr. Evans remarked that he had no objection to the plan of the New York State Medical Society except its complication. It no doubt will work well and do good in New York where the profession is completely organized, but in a large number of the States no such organization exists.

The substitute offered strikes at the root of the evil about which we have heard so much complaint against the Medical College. If we want the standard of attainments in the profession elevated, we must select the materials of which we make physicians. The only way to do this is to guard the portals of the profession—not to place the sentinel at the door of the sanctum. Rigid examinations in the green-room will not answer, at least in the West. After a student has spent the time of his pupilage in his preceptor's office, he considers himself a doctor, and the question is not mooted whether he shall go to practice or not, but whether he shall attend lectures previously or go to practice without; and if the Colleges will not admit him for want of preliminary education, the result is he sets up on his own account.

Dr. Bond of Baltimore followed in favor of the amendment. He went into a lengthy discussion of the standing of the profession of Medicine with the people generally. He thought we made quite a mistake in attaching so much importance to the colleges. The standing of the profession was such that a certificate of qualification from a fashionable clergyman would do more towards introducing one to practice than any college diploma. Thus the miserable quack was often introduced to the parlor, and made the object of the most polite attention, while the worthy yet modest man of science was doomed to tread his thorny path through the shades of neglect.

Dr. Warren, of Boston, thought the picture of the profession by the last gentleman over-wrought. He thought the profession stood high, and that it was the best profession in existence, that ever did exist, or ever would exist. After remarks by others that were not gathered, the amendment was adopted by a large vote.

3d. *Resolved*, That this Association does not sanction or recognize "College clinics" as *substitutes* for Hospital clinical instruction, and that the Medical Colleges be again advised to insist in all instances where it is practicable on the regular attendance of their pupils during a period of at least six months upon the treatment of patients in a properly conducted Hospital or other suitable institution devoted to the reception and cure of the sick.

The resolution was adopted.

4. *Resolved*, That it would conduce both to the convenience and advantage of the students, if the subjects taught in the Colleges were divided into two series; the one of which should be studied during the first year's attendance on lectures; and the other, during the second session. And that examinations should be instituted at the close of the first course of lectures on the subjects taught during that course, certificates of which should be required prior to the final examination. Rejected.

5. *Resolved*, That it is the deliberate opinion of this Association that the plan of examining students for medical degrees in private, and before one professor only at a time, is highly defective, and should be at once discontinued. Laid upon the table.

6. *Resolved*, That examinations for medical degrees should be practical, and that it is desirable as far as practicable that they should be conducted in writing as well as *viva voce*. Laid on the table.

7. *Resolved*, That in view of the importance of a due knowledge of practical pharmacy, the medical schools be advised to require from candidates for degrees that they should produce satisfactory evidence of their having been engaged in compounding medicines and putting up prescriptions, either under the direction of their private preceptors, or in the shop of a recognized and qualified apothecary. Laid on the table.

In regard to examining boards and licenses:

8. *Resolved*, That the interest both of the public and the medical profession would be promoted by the establishment of boards of examiners in each of the States of the Union, to examine candidates for licenses to engage in the active practice of medicine and surgery. Laid upon the table

9. *Resolved*, That the examiners should satisfy themselves that candidates are familiar with the elementary branches of general knowledge. Laid on the table.

10. *Resolved*, That for the purpose of carrying out the objects contemplated in the foregoing resolutions, a special committee of seven members be appointed to prepare a memorial and form of law in reference to the subject of the establishment of boards of medical examiners to be submitted to the Association at its next annual meeting. Indefinitely postponed.

The Committee rose and reported, when the whole subject was, on motion of Dr. Stevens, committed to a special committee to report to-morrow morning. The Association adjourned.

Friday Morning. The Report of the Special Committee on Indiginous Medical Botany being called for, Dr. N. S. Davis of N. Y., Chairman of the Committee, stated, that a report had been prepared by himself in continuation of the one published in the transactions of the society last year. He stated that there were no less than 1000 plants in our country, reputed to posess medicinal properties of value in the treatment of disease; but out of this whole number, only about 150 have been so investigated as to rank among the well known articles of the *Materia Medica*. And of the large number which remains, our knowledge is of the most vague and indefinite character; thus out of about 280 indiginous and naturalized plants named in Griffith's late and valuable work on *Medical Botany*, concerning 150, we are merely told that they are *said* to be good in this disease or that, or they are *said* to have been used by the *Indians*. He further stated that in making up his report, he had chosen such a number of articles, only, as could be thoroughly investigated in reference to the following questions, viz., 1st, On what part of the system does the remedy make its impression?

2d, What is the nature of such impression, and what its secondary effects? 3d, In what ingredients of the plant does its active qualities reside? The committee had acted on the principle, that it was better to settle the real value and modus operandi of one article only during the year, than to collect an unreliable evidence concerning a much larger number.

The report was composed in part of two other papers, prepared with great care and labor by S. W. Williams, of Deerfield Mass., and Dr. F. P. Porcher of Charleston S. C., both members of the committee. Their papers contained a complete catalogue of the medicinal plants of their respective states, arranged according to their natural order. the whole report was referred, without reading, to the Publishing Committee.

Dr. Stevens chairman, reported from the Select Committee appointed last evening, the following resolutions.

1st. *Resolved*, That the Association reiterate their approval of the resolutions in reference to medical education, adopted by the Convention, which met in Philadelphia, in May, 1847, and contained in pages 73 and 74 of the published proceedings of that Convention.

2d. *Resolved*, That the attention of Medical Colleges be again directed to the Resolutions of the Committee on Preliminary Education, adopted by the Med. Convention of 1847, and that they be advised to require from their students that they shall, in all instances, present certificates of due preliminary acquirements prior to graduation.

3d. *Resolved*, That physicians throughout the Union, be advised and requested to require of those wishing to become their pupils, evidence of a proper general education, before admission into their office.

4. *Resolved*, That the Association does not sanction or recognize "College Clinics" as substitutes for Hospital clinical instruction, and that the Medical Colleges be again advised to insist, on the regular attendance of their pupils, during a period of six months, upon the treatment of patients in a properly conducted hospital, or other suitable institution, devoted to the reception and cure of the sick.

5. *Resolved*, That in accordance with a resolution of the American Medical Association, adopted May 4th, 1847, "it is earnestly recommended to the physicians of those States in which State Medical Societies do not exist, that they take measures to organize them before the next meeting of this Association.

6. *Resolved*, That the State Societies be recommended, after they shall have been organized, to recognize as regular practitioners none who have not obtained a degree in medicine, or a license from some regular medical body.

7. *Resolved*, That the Association recommend to the various Schools of Medicine to meet at Cincinnati before the next annual meeting of this Association, and present a plan for elevating the standard of medical education, to this Association.

The chairman hoped that they would be adopted without division.

Dr. Harrison moved that the report and resolutions be adopted.

The motion was opposed warmly. Dr. N. S. Davis, said we sit day after day listening to the reports of committees, have subjects recommitted and passed upon without any consideration by this body, and when the great subject of medical education is taken up for consideration, it is proposed to restrict members in their remarks.

On motion of Dr. R. D. Arnold, of Georgia, the Association resolved itself into committee of the whole, to consider the resolutions seriatim. Dr. Arnold in the chair.

The ten minutes rule was adopted.

The first, second, and third resolutions were adopted.

The fourth resolution caused much discussion, but a small part of which we are able to report.

Dr. Jackson argued at length the impropriety of governors of hospitals excluding students from the wards of such institutions. He said that in Philadelphia they had to adopt the College clinics, as they had for a few years past been excluded from the great City Hospital on the most trivial ground, the mere cracking of a cock-roach being the founda-

tion of the whole affair. This left them as the best alternative, a resort to ambulatory patients.

Drs. Pattison, Harrison, Gibbons, Davis, and others participated in the discussion of the resolutions. It was proposed to amend the fourth resolution so as to read, "while the Association admit the value of College clinics &c.," but the motion was lost.

After amending the resolutions reported by adding, on motion of Dr. Thos. E. Bond Jr., the following, they were reported back to the Association, and adopted.

Resolved, That this Association recommend the encouragement of private medical institutions, strongly advising that dispensary practice be made, as far as practicable, a part of the means of instruction.

Dr. Stillé offered a highly complimentary resolution expressive of the lively sense of gratification felt by the Association for the many marks of kindness it had received during the session. Adopted.

Dr. Bowditch offered several resolutions of thanks, which were adopted.

Dr. Hays, from the committee appointed to consider the recommendations of the Committee on Medical Literature, reported in part the following.

Resolved, That a committee of three be appointed to memorialize Congress in favor of an international copy-right law. Amended so as to require the committee to report to the next meeting. Adopted. The President appointed Drs. G. B. Wood, T. E. Bond, Jr., and I. Hays.

Dr. Evans of Chicago, offered the following Preamble and Resolution, which were adopted by a very large vote.

WHEREAS, Merit should be the test by which one individual is preferred to another, *And Whereas*, the places of profit and honor in our profession should be open to the competition of all, in order that the best selections may be made, therefore,

Resolved, That trustees and others, exercising the office of Vol. II, No. 2.—6.

appointing Professors in Medical Schools, be requested to adopt the system of *Concours*, or public trials, among the means resorted to for calling out the talent of the profession and ascertaining the qualifications of applicants.

Dr. G. B. Wood offered a preamble and resolution in reference to the paper of the faculty of Harvard University on the length of College sessions. But before action was taken the Association adjourned until half past three o'clock.

Afternoon Session. The resolution offered by Dr. Wood in the morning was adopted, in pursuance of the provisions of which, Drs. Jackson, J. L. Atlee, and Alfred Stille, of Penn, were appointed a committee to prepare a paper in favour of lengthening the Sessions of College Lectures, to be printed with the one above referred to.

On motion of Dr. Hays the several standing Committees were instructed to stick to the text. Dr. H. also offered an amendment to the Constitution, abolishing the standing Committees, which by rule lies over until next year.

Dr. Ware, of Boston, offered a resolution instructing one of the standing committees to enquire into the expediency of using the English language exclusively in writing prescriptions &c., which was adopted.

Dr. Wood gave an account of his reception as delegate to the British and to the Provincial Medical Associations, and brought the compliments of the latter body, by their request.

On motion of Dr. Johnson, of Mo., the Committee on Education were instructed to enquire into the expediency of establishing Schools of pharmacy, and adopting a rule that physicians do not patronize druggists who deal in nostrums.

After various resolutions of thanks to the officers and others who had served the Association, and congratulatory speeches from Dr. Z. B. Adams, of Boston, and others, the Association adjourned *sine die*, the place and time of the next meeting having been previously fixed on the first Tuesday in

October next, at Boston, according to the resolution of the Association.

May next at Cincinnati. Dr. Drake and others of that place, were appointed a Committee of Arrangements.

Thus closed, in harmony, a meeting, which, for talent and erudition, has seldom been equaled. Its influence must be powerful in forming the character and opinions, and in controlling the practices of our profession.

ARTICLE III.

CHICAGO MARINE HOSPITAL.

This institution now in process of erection, is to be situated on the point between the river and the lake, being the ground occupied as a military post, and will overlook the harbor so as to produce a beautiful effect. The building will front West on Michigan avenue, and will be convenient to all the marines of the city.

The building will be 90 feet 6 inches front by 128 feet 6 inches deep, three stories high, above a basement, with a cupola elevated to 67 feet.

The appearance will be fine, and the manner of its construction permanent. The basement will be of stone, the other walls of brick.

It will contain forty-eight apartments, besides water closets, bath rooms, &c., and will accommodate three hundred and fifty patients.

Thus, under the auspices of the general government, has been commenced a noble charity, whose blessings will be felt and appreciated by the homeless mariner, through a long succession of ages.

E.

ARTICLE IV.

RUSH MEDICAL COLLEGE.

The friends of this Institution will be gratified to learn that the vacant chairs have been filled by the appointment of gentlemen of high character, and extensive acquirements; both of whom are well known to the profession throughout the whole country.

Dr. Thomas Spencer, elected to the chair of the Principles and Practice of Medicine, lately filled the same chair in Geneva Medical College in Western New York, of which he may be considered the founder, and which ranked among the first Institutions in this country during his connection with it.

He is extensively known as an able writer and as a skilful practitioner of medicine.

He has enjoyed the advantage of a visit to the great Hospitals of Europe. Also of an extensive practice for years in a malarious district of country, so that he is familiar with the diseases of the West.

Dr. N. S. DAVIS, who is appointed Professor of Physiology and Pathology, is the present able Editor of the "Annalist and Record of Practical Medicine in the City of N. Y." He is the author of several prize essays and valuable papers on medical subjects, which have been published.

He gave a highly satisfactory course of lectures in the College of Physicians and Surgeons of N. Y., last spring. But he is especially distinguished by his efforts at medical reform and improvement; he being the originator of the plan of, and an active agent in putting into operation, the National Medical Association, which has been crowned with the happiest results.

It is understood that both these gentlemen will make their future residence in the West.

ARTICLE V.

National Convention for revising the Pharmacopœia of the United States.

The Convention for revising the Pharmacopœia, which met in Washington, in January 1840, adopted the following resolutions.

“1st. The President of this Convention shall, on the first day of May 1849, issue a notice requesting the several *incorporated State Medical Societies, the incorporated Medical Colleges, the incorporated Colleges of Physicians and Surgeons and the incorporated Colleges of Pharmacy*, throughout the U. S., to elect a number of delegates not exceeding three, to attend a general Convention to be held at Washington, on the first day in May, 1850.

“2. The incorporated bodies, thus addressed, shall also be requested by the President to submit the Pharmacopœia to a careful revision, and transmit the result of their labours, through their delegates, or any other channel, to the next Convention.

“3. The several medical and pharmaceutical bodies shall be further requested to transmit to the President of the Convention, the names and residences of their respective delegates as soon as they shall have been appointed, a list of whom shall be published, under his authority, for the information of the medical public, in the newspapers and Medical Journals, in the month of March, 1850.

“4. In the event of the death, resignation, or inability to act of the President of the Convention, these duties shall devolve on the Vice-President, and, should the Vice-President also be prevented from serving, upon the Secretary or Assistant Secretary, the latter acting in the event of the inability of the former.”

In compliance with the foregoing resolutions, the undersigned, having been informed by the President of the late

Convention, Dr. Lewis Condict, that he would be unable, from indisposition, to perform the duties assigned to him, gives notice to the several medical and pharmaceutical bodies enumerated in the first resolution, that a Convention for revising the National Pharmacopœia, will meet in the City of Washington, on the first Monday in May, 1850. The undersigned also requests of the several bodies referred to, that they will fulfil the wishes of the Convention, set forth in the second resolution; and, further, that they will transmit to his address, on or before the 1st of March next, the names and residences of the delegates whom they may appoint, in order that a list of them may be published, as directed in the third resolution.

GEO. B. WOOD, M. D.,

Vice-President of the Convention of 1849.

Philad., May 1st, 1849.

ARTICLE VI.
THE CHOLERA.

This epidemic now appears to be prevalent in most of the cities, and many of the small towns, in the south-west and West, and is spreading among the great cities of the East.

A remarkable feature of the present epidemic is that it spreads from West, Eastwardly, while in its previous appearance in the country, the reverse was the course it pursued.

We shall in the next number give facts in this connection, from which the opinion of its spreading by communication from one individual to another, will be fairly inferable if not anerresistible conclusion.

In Chicago it has gradually spread from one case that occurred on board a boat from St. Louis, and a family of English emigrants, recently arrived, to most parts of the city; yet the degree of mortality has been very moderate compared with other cities in the West.

We learn from Dr. L. D. Boone, City Health Officer and Physician to the Cholera Hospital, that the number of deaths from cholera during the two months of its prevalence here, has been 154. Also, that the number of cases that have occurred, including those with premonitory diarrhoea, rice water discharges &c., has been, at least, one thousand. The mortality has been mostly among foreigners.

We have had, thus far, a pretty uniform mortality during the two months, no day having more than nine deaths, and the average being about two and a half per diem.

We observed that the very warm weather during the last week of June increased the mortality to the maximum above stated, while the cool weather since has reduced it to the average.

The treatment pursued by the physicians varies to some extent, especially in the early stages, but after its full development, the use of anodyne and astringent remedies given per anum and per os to check the diarrhoea, are resorted to generally; with tonics and stimulants, variously selected to suit the case, generally partaking largely of quinine to restore the tone and activity to the system. Calomel is relied upon by some, but is given with other remedies.

The sulphur treatment for the premonitory stage of the disease, is relied upon by some of our physicians, a full account of which will be found on the succeeding pages of this Journal, by our late colleague of the Editorial Department, Prof. Herrick. E.

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ARTICLE VII.

MISCELLANEOUS MEDICAL INTELLIGENCE.

The late destructive fire in St. Louis has prevented the issue of the St. Louis Med. and Surgical Journal, the office of publication having been destroyed. So soon as other arrangements can be made, the editors will resume publication.

Dr. Henry J. Bigelow has been appointed to the Chair of Surgery in Harvard University, in place of Prof. Hayward, resigned.

Dr. B. F. Silliman, Jr., has been elected to the Professorship of Chemistry in the University of Louisville, in place of Prof. Yandell, who has been transferred to the Chair of Physiology and Pathology in the same institution.

Sulphuric acid is said to be a test of the purity of Cod-liver oil. Mixed in the proportion of four parts of the latter with one of the former, a rich violet hue is obtained, passing gradually into a dirty brown. This characteristic is possessed by no other oil, animal or vegetable.

Prof. Bartlett of Transylvania University has accepted the chair of the Principles and Practice of Medicine in the University of Louisville, rendered vacant by the resignation of Prof. Drake.

Dr. Hunt has been appointed to the Chair of Physiology and Pathology in the University of Louisiana, to fill the vacancy occasioned by the death of the lamented Prof. Harrison.

Woods' Quarterly Abstract of the Medical Sciences has been discontinued for want of promptness on the part of subscribers.

A new Medical Journal is to be issued at Lexington, Kentucky, under the editorial supervision of Prof. E. L. Dudley.

There are five hundred and twenty practitioners of medicine in New Hampshire.

CHOLERA,

Its Cause, Pathology and Treatment.

By WILLIAM B. HERRICK, M. D., Professor of Anatomy in
Rush Medical College, Chicago.

In making some remarks upon Cholera in the January No. of this Journal, it was stated in substance, as our opinion, that the electrical changes constantly taking place on the earth's surface, in the atmosphere and in our own and the bodies of other animals, must have an influence either directly or indirectly in the modification and production of this and other similar epidemics.

At that time and during the previous fall and winter, my young friend Dr. J. H. Bird and myself had been collecting facts with the view of determining to what extent, the substance produced during the passage of electrical currents through the atmosphere, called by the discoverer *ozone*, might act as a deleterious agent in causing disease.

Our attention was first directed to this subject by reading an extract from a German Periodical, in the Amer. Jour. Med. Sciences for July 1848, in which it is stated in substance that experiments made some years since by Prof. Schonbein, tended to show that where ordinary electricity passes from pointed bodies, through the atmosphere, this substance is produced.

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The experiments made by Schonbein, soon after the discovery of *ozone*, were verified by numerous other chemists, in order to determine its true nature and chemical relations. A good description of the different circumstances under which *ozone* is produced naturally, and of the various methods for obtaining it artificially, may be found in an extract from a letter to M. Dumas from M. d'Marignac, published in the Chemical Gazette for April 1845.

Most chemists describe *ozone* as being constituted of three parts of oxygen to one of Hydrogen, making a tritoxide of Hydrogen. All agree that it is one of the most powerful oxidizing agents known. By virtue of this property, it decomposes most compounds constituted in whole or in part of substances having an affinity for oxygen, such as sulphureted and carbureted Hydrogen, Iodide of Potassium, &c., converts protoxides, into peroxides and gives up to carbon and hydrogen its oxygen to form carbonic acid and water. The best test for *ozone* is iodide of potassium dissolved in a solution of starch; the *ozone*, acting as a decomposing agent upon the iodide of potassium, liberates iodine.—Uncombined iodine, having a strong affinity for starch, combines with it, to form the well known compound, iodide of starch, the beautiful blue color of which forms its principal characteristic. In view of these facts, it is easily understood, why it is, that strips of paper moistened with the above named solution and exposed to an atmosphere containing *ozone*, assume a blue tint, more intense, and acquired more rapidly in proportion to the amount of *ozone* present.

The smallest possible quantity of *ozone*, it is said, can be detected by this test; in using it however, care should be taken, not to expose the strips of paper in situations where gases, such as sulphureted and carbureted hydrogen, may be suspected to be present, as these, as well as most other highly combustible substances, decompose *ozone*.

Ozone, acting as it does, as an intense oxidizing agent, is known to have a powerful influence both upon organic and in-

organic substances, in causing chemical changes. We might be led to infer, therefore, even in the absence of facts to support the conclusion, that animals living in and breathing an atmosphere containing it, would be liable to become in some way affected by its influence. All the facts, and the results of a few experiments, fully justify this conclusion.

Small animals confined in an atmosphere impregnated with *ozone*, die in from five to ten minutes, and two or three inhalations of *ozonized* air by individuals engaged in experiments, have uniformly produced irritation and, in some instances, a degree of inflammation of the mucous membrane lining the air passages, similar to that caused by breathing chlorine or bromine; hence the conclusion arrived at by Schonbein that *ozone* might be the principal, if not, the only cause of epidemic influenza.

These conclusions of Schonbein are well sustained both by arguments and facts drawn from various sources. In the Amer. Jour. of Med. Science for July 1848 may be found the translation from Schonbein's article, [from which we take the following brief extract :

"Now if it were shown, that at certain periods, characterized by a general prevalence of catarrhal affections, large quantities of chlorine or bromine were present in the atmosphere, no one would hesitate to ascribe the cause of these diseases to the above substances. But it is an established fact, that by the inhalation of proportionally small quantities of ozone, physiological effects are produced similar to those which are occasioned by the inhalation of air charged with chlorine or bromine. This led Schonbein many years ago to conjecture that many catarrhal affections might be owing to the presence of ozone in the atmosphere. In the course of last winter, several catarrhal epidemics occurred in Bâsle, so that very few persons escaped; and Schonbein and many physicians of that town, instituted a series of daily observations, with the view of ascertaining how far the rapidity and intensity of the blue coloration of the iodide paste were connected with the prevalence and intensity of the catarrhal symptoms: the results were conclusive as to the simultaneity of the maximum of the coloration with the extremest intensity of the epidemic."

Dr. Spengler states "that in the village of Roggendorf, in Mecklenburgh, towards the close of 1846, slight catarrhal affections became prevalent,—that but slight trace of ozone was then to be detected in the air. With the opening of the following year, however, these catarrhal affections assumed the severest forms of tracheal and bronchial disease, hooping-cough became common, both among children and adults; then reagents detected a great increase of ozone in the atmosphere, and, at the same time, influenza spread over the district. On the 9th January, the *ozonometer* showed a still further increase in the proportion of ozone present in the air. On the same day two persons died of influenza, and gradually the influenza spread more extensively, until, on the 21st, scarcely an individual had escaped. Thus there seemed a decided connection between the presence of ozone in the air and the spread of the epidemic."

Dr. Day, in a scientific and well-written work on the "Diseases of advanced life" recently published, gives a brief history of the epidemic influenza, which prevailed in England in 1847, and in his remarks upon the causes, uses the following language:

"A theory has been recently propounded by an eminent German chemist (Schonbein, the discoverer of gun-cotton) that epidemic influenza is dependent on the presence of an imponderable agent termed *ozone*, in the atmosphere. This ozone is apparently a result of atmospheric electricity. It may be prepared in the laboratory of the chemist, and from what we know of its properties there are *a priori* reasons for suspecting that it would, if existing in the air we breathe, give rise to great irritation of the respiratory organs. Several physicians have actually found that an excess of this material was present in the atmosphere during the late epidemic."

Numerous other facts and arguments might be urged in support of Schonbein's theory, but want of time and space compels us to close our remarks upon this point, with the expression of the belief on our part, that subsequent observations and experiments will ultimately sustain us in what we now assume to be a fact, as well substantiated as any other in medi-

cine of a similar character, that *ozone is the cause of epidemic influenza.*

Having arrived at this important conclusion, we are naturally led to inquire, in the next place, if other and similar diseases may not be dependent upon the same cause? The history of most epidemics shows, that in many respects, they are similar, appearing and disappearing as most of them do, without any assignable cause: severe and fatal in their effects at the onset; but more mild, and comparatively harmless, as the time approaches for their disappearance.

Asiatic Cholera is a disease, the history of which is so nearly allied to that of epidemic influenza, that a description of either, needs but a change of the name and we have an equally correct account of the other, as will be seen by taking the following brief extracts from Dr. Hancock's book on Cholera, published in London in 1832, and comparing them, with others placed opposite, selected from Dr. Day on Epidemic Influenza, contained in his new work on the "Diseases of advanced life."

Dr. Hancock on Cholera.

"The cholera traversed the great part of Europe last year (1831.) In Warsaw it appeared in April, Dantzig and Riga, it visited in May; Archangel and Petersburgh, in June; Pesth and Bucharest in July; it reached Berlin in August; Vienna in September; Hamburg in October; and the eastern shores of England at the close of the year."

Dr. Day on Epidemic Influenza.

"The great epidemics (Influenzas) generally travel from Russia, over Germany Denmark, Sweden, England France, Italy, Spain, in from three to six months; and then reach America."

Those attacked with Cholera "were the poor, ill fed and wretched; and it broke out in the low, confined and filthy places in which the population was most dense."

"It was severe and generally fatal at the beginning, and mild and manageable at the decline, in every place. Its duration as an epidemic seldom exceeded two months."

"Influenza appears to be generated in ill organized camps and in crowded, ill cleansed cities, and to be the most fatal among people who have for some time been depressed and ill fed."

"It attained the greatest intensity in the second week of its course; raged with nearly equal violence the third week; declined in the fourth, and then partly disappeared."

The analogy between the two Epidemics under consideration, is shown to be most remarkable, by the following quotations from different authors.

Dr. Hancock states, that at the close of the year 1832, it had appeared on the Eastern coast of England, after having passed over the Northern and Eastern part of Europe. The great part of the West and South of Europe had not as yet been visited by the Epidemic. "But" says he "these parts though exempt from Cholera have not been free from other maladies."

"In France, we are told, that the pulmonary Catarrh or *Grippe*, has been raging to a considerable extent, and has even reached Italy, creating much alarm at Rome. Diseases in truth seem to have experienced remarkable interchanges of climate and season. While Europe has had Cholera as it appeared in India, some parts of India, as Culcutta, have been affected with a disease, which they call a new Epidemic, like the Influenza or *Grippe*, lately prevalent in France. Cholera, a disease of Autumn and heat, has shown itself in the cold of Winter."

Dr. J. Spencer, one of the most correct observers, and talented physicians of our own country, wrote an essay on Cholera, which was published during its prevalence here in 1833, from which we take the following extract expressive of his belief, even at that time, in the origin of both diseases from the same cause. "Influenza has generally preceded the invasion of the present epidemic, and presents an interesting association with the history of this malady. The epidemic predisposition in the influenza, appears to be thrown upon the mucous membrane of the lungs, which entirely resembles in its organization the structure of the intestinal membrane."

A comparison of the history of both epidemics shows that influenza has always proceeded, frequently accompanied, and generally followed, the appearance of cholera.

Meteorological facts and statistics show that the state of the atmosphere, as to its electrical condition, temperature, humidity, movements, &c., is similar, previous to the appearance and during the prevalence of Cholera, to that which precedes and accompanies influenza. Influenza, like cholera, finds by far the greater number of its victims in the narrow, badly ventilated streets of large cities, among the half-clothed, starving victims of poverty. During the prevalence of both cholera and influenza, all classes suffer more or less; some to a greater, others to a less extent. Both diseases attack, without distinction, the aged, middle aged and young, and both continue alike, about the same length of time; more severe and fatal in their effects at the onset, than at any subsequent period.

In view of the above facts, taken in connection with numerous others of the same import, we are justified, as it appears to us, in coming to the conclusion that *Cholera and Influenza are so nearly allied as to justify us in assuming that both are produced by the same cause, and that this cause is Ozone.*

Having assumed as we do that ozone is the cause of Cholera, we shall now, after referring briefly to a few physiological facts, attempt to explain its mode of action.

According to the views of modern physiologists, the inspired oxygen mingles with the blood in the lungs, without combining chemically with any of its constituents, and remains thus uncombined in a state of diffusion in this fluid, during its passage to, and until it reaches the systemic capillaries, where certain changes are known to take place, such as the disappearance of oxygen, the production of carbonic acid and the generation of animal heat. All the chemico-vital changes constantly going on during the continuance of healthy vital action, take place doubtless in the capillary vessels of each particular part or organ.

It is evident then, that these important changes would not occur, nor could the functions of any organ be properly performed, without a due supply of arterial blood, constituted of its normal constituents, and furnished by the lungs with the proper amount of uncombined oxygen.

Cholera is a disease, the symptoms of which, such as lividity and coldness, shrinking of the skin, stoppage of all the secretions, &c., indicate most clearly the want of healthy action in these vessels. It is absurd to suppose, for instance that in this disease as in health, oxygen and the constituents of the blood and tissues combine chemically, *in the capillaries* since no animal heat is generated *in these vessels* as the result of such combination; yet it is evident from the appearance of the blood in this disease, that such changes do occur, and that arterial is converted into venous blood, more effectually and rapidly even, than in health. The icy coldness pervading the breath, mucous membrane and whole external surface, shows conclusively that no such changes take place either in the pulmonic or systemic capillaries, yet both sides of the heart and all the blood vessels, arteries as well as veins are found to contain, both before and after death, dark venous blood.

These facts, taken in connection with numerous others, which will be referred to hereafter, show as conclusively as the nature of the case will admit, that these changes in the blood, take place *in the arteries, and left side of the heart*, during

its passage to, and before it reaches the systemic capillaries. It is evident, that, in health, there exists in these vessels a force, by the action of which, chemical union is effected, between elements, which, though in contact and intimately blended together, do not combine in passing through the heart and large arterial trunks, in which no such force exists.

Now if it can be made to appear that in some diseases, as in cholera, a force equal to, or stronger than this, acts upon the arterial blood during its passage to, and before it escapes the systemic capillaries, causing a chemical combination of its constituents with oxygen, there is no difficulty in explaining how *ozone*, one of the most powerful oxydizing-agents known, produces cholera.

When present in the air, it passes into, and is mixed with the arterial blood like pure oxygen and being, as it is, a compound of oxygen and hydrogen; easily decomposes, slight causes effect a separation of its elements and the consequent production in the arteries of new compounds of oxygen and the constituents of the blood, similar to those produced naturally in the capillaries.

During the decomposition of the *ozone*, its oxygen being in the nascent state and consequently more ready to form new combinations, changes the arterial blood to venous, during its passage along the heart and arteries, previous to reaching the systemic capillaries.

This view of the pathology of cholera is sustained both by the symptoms during life, and examinations after death. The burning sensation constantly present at the pit of the stomach, and the insatiable thirst for cold drinks, always manifested by cholera patients, show that so far as their feelings and desires are indicative of their condition, heat must be generated in the heart and large arteries of the chest and abdomen as the result of chemical changes; whilst the entire absence of it, on the surface, at the extremities, and in the mucous membrane lining the cavities, are equally conclusive evidence that

no such changes take place in the capillary vessels. Growth nutrition, secretion, and excretion are, to a certain extent, the result of chemico-vital changes in the systemic capillaries, consequent upon the action of uncombined oxygen upon the constituents of the blood and tissues. The almost entire absence, in cholera, of all these vital phenomena, may be explained by assuming, what facts seem to justify, that the blood undergoes a change similar to that from arterial to venous, previous to reaching the capillary vessels of the different organs and tissues.

That the arterial blood in this disease undergoes a change, identical with, or similar to, that which takes place naturally in the systemic capillaries, is evident from numerous facts. Twenty dissections of cholera patients made in Edinburgh by John Lizars Esq., presented indications of this change of the blood, as will be seen by the following quotations. "Brain—This organ was examined in twelve subjects, and in all, the *arteries* and veins of the integuments were distended with dark blood." "Heart—In thirteen the right side was full of dark blood." "Aorta—In all it contained more or less dark blood."

Dr. John Ware, in giving a description of the post-mortem appearances in twenty cholera patients, says, "The arteries always contained black blood."

In the Madras report on cholera, will be found the following statements concerning the condition of the blood in the arteries, previous to death. "The temporal artery having been frequently opened, the blood was found to be dark and thick, like venous blood."

The above theory gains additional support from the fact, that the blood secretions and excretions, in cholera, contain an unusual amount of highly oxygenized constituents, in the form of coloring matter, acids, &c. In fact there is nothing, so far as we have been able to judge, in the history, morbid changes, or results of different kinds of treatment in cholera, inconsistent with these views of its cause and pathology.

Facts tending to show that the blood in the arteries of cholera patients, undergoes important changes, effected probably by the influence of oxygen, could be multiplied to almost any extent, but as it seems unnecessary to say more upon this point, we will now pass to the consideration of the most important part of our subject: *The treatment of Cholera.*

Cholera, according to the views and opinions expressed above, is a disease in which the arterial is changed to venous blood, before it reaches the systemic capillaries, or to express our views of its pathology more definitely, its capacity for affording nutriment and supplying animal heat to the different organs and tissues, is impaired or destroyed, as the case may be, as a consequence of the combination of many of its most important constituent with oxygen, under the influence of that most powerful oxydizing agent *ozone*.

If *ozone* is the cause of cholera, as we have endeavored to show, and if the symptoms and morbid changes in this disease are produced by its action as an oxydizing agent upon the constituents of arterial blood, it is evident that the proper remedial agents for this disease are such substances as most effectually and rapidly destroy *ozone*.

All that class of bodies known as combustibles, possess this power, to a greater or less extent, in proportion to their affinity for oxygen, and are therefore the proper remedies for the disease in question. That they are so, is evident from the fact that highly combustible substances, such as camphor, ether and chloroform, have always been used, and considered by many, as among the most efficient medicines for cholera. This class of medicines has become popular and is used, because experience proves that beneficial results follow their administration; not because we had any just conception of their mode of action: that they are so, no one could doubt, after witnessing the effects recently observed by the writer and numerous others, from the use of sulphur as a remedy for cholera, as first suggested and administered by Dr. J. H.

Bird of this city. The letter upon this subject from him to me as editor of this Journal, has been received too late to appear among the original communications of this number: it is mutually agreed between us, that the most important facts contained in it shall appear, in connection with this, my explanation of its mode of action, and that the next number shall contain a detailed account from him, of cases which have been, or may hereafter be, subjected to the sulphur treatment.

Soon after the reception of the letter referred to above, and after the sulphur treatment had been fully tested by Drs. Bird, Blaney and myself, I was induced, in compliance with the solicitations of numerous citizens who had experienced the beneficial effects following from its use to depart, somewhat, from the course usually pursued by medical men, in reference to newly discovered remedial agents, and make a public announcement of the facts contained in the letter and the results of our experience, in the Chicago Journal of the twenty-ninth of May.

Experience since that time, has convinced us of the propriety of departing somewhat from the course recommended at that time, in using the remedy more frequently and in larger doses. In other respects, our views are as expressed in the letter and embodied in the following extract:

"In one of our recent Medical Journals, an article appeared describing the method of detecting *ozone* in the atmosphere, thus supplying the means of determining whether or not it was present at the very time when cholera was beginning to make its appearance amongst us.

Dr. Bird's experiments as well as those made subsequently by Dr. Blaney and myself from day to day since that time, show that *ozone* is present in our atmosphere, and that the amount is in proportion to the severity of the disease from time to time.

About a week since Dr. Bird determined to try the effects of sulphur upon himself and others, troubled as nearly all have been more or less of late, with uneasy sensations, slight pains &c., in the digestive organs.

The beneficial effects resulting from its use both in his and

my practice was such as to convince me at once of its utility in the class of cases described above.

During the last few days Drs. Bird, Blaney and myself have continued to use this apparently simple remedy to the exclusion of nearly all others in all cases of choleraic symptoms. The result has been wonderful. All the premonitory symptoms, such as pain, a sense of fullness, unnatural movements, slight diarrhoea, &c., have uniformly yielded at once to a single dose of three, to four grains of sulphur.

In cases where either cramps, diarrhea or vomiting have been present, and in fact where all these symptoms have existed in conjunction, the use of sulphur in the above named doses every three or four hours, has had the effect to ameliorate at once the patient's condition.

So far as its efficacy has been tested *in the worst stages of collapse*, most satisfactory results have been obtained. In two or three cases of the kind the effect of the remedy has been to bring back pulse to the wrist, restore warmth to the surface, and stop the profuse diarrhoea and vomiting.

In truth, the results obtained so far, have been such as to convince all of us, who have administered it, and witnessed its effects that *if any remedy deserves the appellation, this is a specific for cholera.*

It having been determined to make this public statement, it is expected in return that no hasty conclusions will be made, either for or against what appears to be a proposition to accomplish much by very simple means.

Although the results, so far as obtained, in a short time, and by a few individuals, seem to justify our conclusions, it is hoped that physicians will continue to depend on what they consider the most efficient practice, in bad cases of the cholera, until they shall have tested the matter themselves, and formed their own conclusions; and also, that whatever may be the confidence of individuals in this or any other remedy; they will not depend upon their own judgement in any case, even of slight symptoms, whenever it is possible to consult their physician."

Since the publication of the letter from which the above is an extract, we have become convinced from experience and observation, that sulphur possesses all the powers claimed for it, as a curative agent in cases of pure cholera; but it is liable as we know, to fall into disrepute as a remedy, in the

hands of physicians, who, for the want of proper discrimination, look upon and treat, as cholera, during its prevalence, all other diseases of the digestive organs. With regard to the action of sulphur, it may be said, that it is by no means, probable that it is taken into the blood, in the crude state, or that it acts very efficiently in effecting the decomposition of *ozone* in the form of a simple body; on the contrary, the escape of sulphureted hydrogen from the stomach and rectum, and the odor from the surface, always present, whenever sulphur is given to cholera patients, indicate most clearly, that its compounds, such as sulphurous acid and sulphureted hydrogen are found almost immediately after its administration, and therefore that these, of all others the most diffusible and combustible of gases, are the real and efficient agents by which the decomposition and consequent destruction of *ozone* is effected.

If highly combustible gases, such as the sulphureted and carbureted hydrogen, and those constituted in part of ammonia and phosphorus decompose *ozone*, districts in the vicinity of sulphur springs, and of decomposing animal and vegetable matters, ought to be less subject to the prevalence and spread of cholera. That a few sporadic cases may have occurred in the neighborhood of such springs, is not strange; since strangers are constantly visiting such watering places and might be attacked immediately after their arrival, and before they had experienced the beneficial influences of a residence in their vicinity; but so far as can be ascertained by inquiries, assiduously made, of those most likely to be informed upon this point, cholera has never prevailed as an epidemic in sulphur districts. That the gases produced during the decomposition of animal and vegetable matter are preventatives of cholera, is evident from numerous facts, among the most conclusive of which are those obtained by the researches of M. Double in 1832, and embodied in one of the following extracts selected from various sources and offered

in conclusion, as additional facts confirmatory of the above views.

M. DOUBLE has made a report to the Royal Academy of Medicine on this subject. When the cholera appeared at Brios, a physician of that town saw with fear that the workmen had unpaved the streets for the purpose of cleansing them ; he feared that the removed earth might give rise to fatal or choleric exhalations, an observation which he thought had already been made at Paris. In consequence of which he wrote to the prefect, and the latter transmitted his letters to the minister, who sent them to the Academy to decide the question. Numerous researches were necessary to arrive at this solution : M. Double devoted himself with the greatest care to this subject ; he described all the work of this kind which had been done in Paris since the origin and during the existence of the cholera ; he has followed them from street to street in the different sections of the city ; he has given all their dimensions ; he has pointed out the nature of the several strata of earth which have been dug out, and after the removal of the earth, he has shown that the inhabitants of the streets where the excavations were made, as well as the workmen employed, have been without comparison more healthy than all others. He supports this remark, both by the recent experience of M. Parent-Duchatelet, and by the observation made at Montfaucon, where persons are occupied in the most unhealthy work, and where notwithstanding very few of the workmen are effected. From these facts M. Double concludes that the exhalations which escape from animal matters are not so dangerous as have heretofore been supposed, and that, even during an epidemic, the removal of earth, which increases these exhalations, can be made without danger ; but that this, however, should not restrain the administration, when peculiar circumstances should force it to defer enterprise of this nature. After an animated discussion the Academy decided that the conclusion of this report should not be expressed in terms decidedly affirmative. However, the final drawing up of the report was entrusted to M. Double, and the report and his conclusions were put to the vote and were adopted.—*Archives Generales, 1832.*

"If ozone is the cause of cholera and is the poison which produces the disease, as is alledged by Dr. Bird of Chicago, then it is a simple thing to account for the absence of cholera

in our city at the present time, as well the mild type in which it was exhibited in 1836-4. The sulphur which exists in great quantities in our atmosphere, unites with the ozone and destroys its influence."—*Pittsburgh paper, June 1848.*

"If the prevalence of influenza and cholera, be owing to ozone, the vapors of sulphur, or sulphurous gasses, must be protective against it. This is confirmed by, while it explains the immunity of those engaged in, or living near sulphur works."—*Trans. from German, from Heils Zeitschrift.*

"Another circumstance which tends strongly to corroborate the same theory, we have ascertained by inquiring at the city inspectors office. During the cholera of 1832 not one of the many scavengers employed who inhaled an atmosphere tinctured with sulphureted hydrogen, was taken with the disease. Gas manufactorys and other establishmens where sulphur is evolved, are also exempt from its attacks."—*New York Tribune.*

During the prevalence of this distemper in '32 I lived in Birmingham, (England) where more Sulphuric Acid is made and used than any other place, perhaps, in the world ; and though all the towns and villages for many miles around were severely afflicted, the disease never reached Birmingham except in one instance of an aged female, and nearly all the physicians there denied that as being cholera.—*Correspondent Ibid.*

I have received yours of this date, [June 13 '49] and have no hesitation in corroborating what you say as to my having visited the Cholera Sheds in 1832-4, for the purpose of seeing that the attendants and nurses did their duty to the poor sufferers or patients. I went among them without fear having impregnated my body with sulphur, owing to my friend Colquhon Sterling, Esq., of Edinbarnet, near Glasgow having assured me that after being 35 years in India, in the Medical Department, and to the head of which he had been raised, he had never known an instance of any person being seized with cholera who had put their bodies into that state; and that even, after the disease had seized them, by dosing them with sulphur and characoal, it generally operated as a cure. *Letter from A. Ferrie to A. Urquhart, Montreal.*